The Steacie Library Dungeon Hackfest: Hackers in the Library Coding, Collaborating and Creating

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Abstract

The Steacie Science and Engineering Library at York University hosted its first annual Steacie Library Dungeon Hackfest in February 2013. The purpose of a hackfest is to spend a day (or longer) using computer programming skills to collaborate on a particular software project and, hopefully, bring the project to reality. The project may be an app, widget, or website. It is evident that hackfests, as a form of engaged learning, help to reinforce the relevance of the library since it has implications for information literacy, open access, faculty liaison, and the changing perception of library as place.

Twenty-five participants that included students, faculty, and staff hacked on Open York Data: York University’s openly accessible records and data such as course codes, lab stats of computers available in various libraries, subject headings, and research interests of faculty. The Hackfest produced several innovative ideas including a “Class Optimizer” program to help students generate a course schedule, and a mobile android app “YU Labs” that informs students of the computers available in a specific library.

Library instruction was informally imparted during the Hackfest. There were discussions about open source, developing a research idea, and recommended tools to help students complete their projects. This article encapsulates the inspiration behind the Hackfest, discusses the library as the host, the resources used, the theme, achievements, and assessment. To summarize, the library Hackfest provided a space for literacy, life-long learning, and support of the open source pedagogy.

Keywords

hackfest; computer science and engineering; software projects; open source; information literacy

Introduction

The Steacie Science and Engineering Library at York University hosted its first annual Steacie Library Dungeon Hackfest on February 21, 2013, during reading week. In an age of Google, how do we revitalize the academic library as relevant? It is through events such as the Hackfest that academic libraries can remain important. The library Hackfest provided a space for information literacy, life-long learning, and support of the
open source pedagogy. The event theme was Open York Data where participants spent the day in front of their computers, coding, collaborating, and creating open source innovations.

The event was established as outreach to undergraduate and graduate students, faculty, and staff to promote information literacy and library services. Even though the event was open to the entire York community, most participants were from the Computer Science and Engineering departments. Other participants included a History major, Digital Media student, Earth Space Science and Engineering faculty, and library staff. In addition, the Dean of the Lassonde School of Engineering, Dr. Janusz Kozinski, and the University Librarian, Cynthia Archer, visited the “dungeon”, the library’s basement, to ask students about their projects and assist with coding.

What is a Hackfest?

Hackfests are engaged learning events that bring computer programmers together with other researchers to build apps, widgets, websites, or other software projects. The first half of the event is mainly about forming groups, discussing hack ideas, and getting started on coding. The second half is spent continuing with coding, moving the project forward, and solving issues collectively to create a final product.

Hackfests, also known as hackathons, codefests or codeathons, are increasing in popularity across Computer Science and Engineering schools in which the departments host the event (Denning and Cohen; Lapp et al. 287; Rursch, Jacobson and Sullivan 13). The University of Michigan Computer Science and Engineering Department hosted a nationwide hackathon; it was a student run event that saw 550 students and 127 projects (“Student-run hackathon…”). Stanford University, California hosted a Stanford Dance Marathon: a hackathon with 34 participants who hacked for 24 hours on not for profit software ideas (Giannikas 7). In addition, hackfests are common at technologically motivated conferences. In the late 1990’s, hackfests formally formed at conferences (Leckart 109). They surfaced as a reaction to the mundane nature of lecture format conferences. Participants sought a collaborative experience and would group together for a coding session. These hackfests were not about competition or prizes, but simply coding for the sake of coding. Currently, we see hackfests at library conferences (Heller); for example, the Access Conference (http://accessconference.ca/) hosts a Hackfest throughout the event that includes presentations of the final projects.

Hackfests have been occurring since the 1960’s without being called as such. In his book Hackers, Steven Levy discusses MIT students preferring 24-hour marathon coding sessions as a way to spur creativity and innovation (20). Many large companies host hackfests to encourage creativity and to initiate ideas. These companies include LinkedIn, Yelp, Google, Facebook, RockMelt, and Path (Leckart 109). There are different types of hackfests: women only, college students, to fight autism, to improve education, to help veterans, to find clean energy solutions, grocery shopping, and solving water pollution problems, to name a few. The website Random Hacks of
Kindness ([http://www.rhok.org](http://www.rhok.org)) depicts how computer programming can be directly linked to public services and community sustainability.

**The Steacie Library Hackfest**

This time the hackers were in the library. Why was this important? The Steacie Library Dungeon Hackfest contributed to the advocacy of open access, it provided an opportunity for informal information literacy, it invoked library as place, and last, it allowed for collaboration and outreach as a faculty liaison. With an expanding Engineering department at York University, there is a need for the library to encourage innovation and embody the Lassonde’s School of Engineering ethos: Renaissance Engineers. The Renaissance Engineer is an “entrepreneurial engineer with a social conscience and a sense of global citizenship” ([http://lassonde.yorku.ca/](http://lassonde.yorku.ca/)).

The Renaissance Library meant providing a unique initiative, such as the Dungeon Hackfest, to demonstrate the library as a resource for students and faculty, a place for engaged learning, to improve programming skills and to provide an opportunity to network with colleagues and students. The Hackfest embodied the Renaissance ideals by utilizing students’ entrepreneurial skills to build software projects that are socially relevant, in this case to the York University community.

The theme, Open York Data, incorporated York University records that are freely accessible, such as course codes, lab stats of computers available in various libraries, subject headings, and research interests of faculty. With all this information aggregated, how should we use and disseminate the information in a way that is useful to students and faculty? The Hackfest produced several novel ideas that addressed this question (Appendix E). These included a “Class Optimizer” program that helps students generate a course schedule and a mobile android app “YU Labs” that informs students of the computers available in a specific library.

Open access is a significant component of scholarly communication in academic libraries. The movement calls for the free immediate online access to scholarly research and the ability to use the research as one needs ([http://openaccessweek.org](http://openaccessweek.org)). The movement is also about the equitable access to information that is at the apex of librarianship. Continuing with the theme, the library decided on an open source hackfest. This meant that any code created during the Hackfest would be made freely available for anyone to use as needed in his or her own code creation. The open source movement rejects “centralized control of creative work in favour of...‘open’ sharing of information” (“open source”). The Open York Data theme unified the collaborative, freely available, and sharing of information open pedagogy that both the open access and open source movement respect.

**Planning for the Hackfest**

A *Wired* magazine article describing people “hunched over” (Leckart 106) their computers in a basement working at source code for 48 hours straight inspired the idea
of the library hosting a hackfest. The idea is that being fuelled by caffeine and confined in a space meant for hacking all day would be conducive for creativity and produce an amazing app, such as the next *Angry Birds*. Even more, these hackers, mostly students, are potential entrepreneurs interested in capital investors’ ability to finance their app, game, or widget. Similarly, the Renaissance Engineer emphasizes producing entrepreneurial graduates who understand the commercialization and social influence of the software that they are inventing. The Hackfest as a means to produce software is a way for students and faculty to learn the philosophy of Renaissance Engineers, as participants must consider the entrepreneurial and social consequences of their products.

As a pilot, the annual Hackfest started as a single day event from 9 a.m. to 6 p.m. that included lunch, caffeine, and snacks. Though the event was not 48 hours straight, and without Redbull, it was a stepping-stone towards more Hackfests in future years.

Planning started with research on hackfests during November. Questions asked were: where have hackfests been held; what examples are there of hackfests in libraries; what made these hackfests successful; what type of hackfests are there; are there articles written on hackfests; and how does one plan and organize a hackfest? From this research it was discovered that Computer Science and Engineering schools across the United States have been hosting hackfests, sometimes sponsored by Google, Yahoo, or Facebook. In Ontario, the University of Toronto (UofT) hosted a hackfest in December 2012 in the Mad Lab (*http://mobile.utoronto.ca*/), a Mobile Application Development Lab. Also, Technostorm, a UofT group from the IT department, hosted a hackathon that searched for solutions to global health issues (Goldberg). However, no libraries have appeared to host a hackfest. In this aspect, it was important for the Steacie Library to seize the opportunity for librarians to forge a stronger relationship with students and faculty in the sciences and broader York community. The library became a hub for creativity. In December 2012 a budget was approved by the University Librarian’s office. Next, a logo, a website with a registration form (*http://www.library.yorku.ca/cms/steacie/hackfest/*), and posters (Appendix A) were created.

By January 2013, the focus shifted to promotion and marketing. In addition, an online assessment was created using Survey Monkey for participants to evaluate the event (Appendix B). Once the event was over, it was important to ensure groups knew how to upload code to the source sharing website, GitHub. These can be viewed on the Hackfest website. Finally, the month of April was used to reflect on the event and create a to-do list for the following year. Also, a poster was presented about the Hackfest to summarize and reflect on the event. At the time of writing, the planning continues for the Second Annual Dungeon Hackfest in September 2013.

**Publicity**

Promotion began two weeks prior to the event. This started with an article in Y-File (York’s daily e-newsletter) and a radio interview on YorkCast Campus Happenings on
York’s radio station, CHRY 105.5 that featured the Hackfest event. An advertisement was placed by the Communications Officer on the York Libraries website. Flyers were posted in libraries and throughout buildings occupied by Science students and Digital Media students. Additionally, the event was promoted at the Engineering Faculty Council meeting and the Computer Science Department meeting. Information for the event was also disseminated through student (undergraduate and graduate) and faculty listservs two weeks prior and again several days before the event. Lastly, the Social Media Coordinator and other librarians in Steacie Library publicized the event on Facebook and Twitter.

The registration form for the event was created using Google Forms to maintain an Open Data theme. Google Forms allows participants to view others who are partaking and the existing hack ideas people have proposed. Having hack ideas open was in keeping with the theme of Open Data and allowed others to view them so they could start forming groups prior to the event. The event was limited to thirty people. Thirty-six people registered and twenty-five participated on the day of the event.

Participants were contacted through email that was provided in the registration form. A day before the event, a reminder message was sent out to participants about the schedule for the day, where to meet in the morning, a list of proposed ideas, a link to the registration spreadsheet, and a note on photography permission.

**The Hackfest in the Library Dungeon**

February 21, 2013 was the Hackfest inaugural day, starting with registration at 9 a.m. The Hackfest occupied two rooms: the staff lunch room and the basement computer lab. The former was used as an informal meeting space to begin the day and to eat breakfast and lunch. The basement computer lab was the metaphorical dungeon where students took their laptops and hacked. The morning setup included breakfast, coffee and posters around the room of the different hack project ideas. As participants arrived they received swag and promotional items such as a hackfest magnet and hackfest stress ball. The stress balls were well received as many actually used them while thinking and hacking during the day.

From 9 to 10 a.m. participants mingled, formed groups and ate breakfast. After a brief introduction, hack ideas were presented to the group. From there, mingling continued and people started to form groups based on similar ideas and interests. Around 10 a.m. people started to head downstairs to the basement. Lunch was around noon when people moved upstairs to eat while some stayed and continued to hack. Throughout the day assistants from Library Computing Services and one member from IT acted as mentors. They assisted groups by learning about the projects, ensured groups had the information they required, provided suggestions, and facilitated where possible. For example, one assistant from the university’s IT department was a great help in locating open data. In another instance a graduate student mentioned he had accomplished a lot but was unsure where to store all of his data. A data management conversation ensued
during which our Digital Assets Librarian, who was also participating, recommended Dataverse (http://guides.scholarsportal.info/dataverse).

At 5 p.m. the groups were asked to stop hacking, and each group presented its accomplishments and challenges. After the closing statements, participants were asked to complete the feedback survey located on the Hackfest website. Finally, a photograph of participants was taken (Appendix C). Those who were inclined later met at a campus pub to regroup and relax after a long day of hacking. Please see the Hackfest schedule for more information on the day events (Appendix D).

**Evaluation and Results**

Participants were asked, both at the beginning and at the end of the event, to complete the online Survey Monkey questionnaire. Of the 25 participants, 12 responded to the survey (48% response rate). The survey consisted of 10 questions. Of these, four were multiple choice and six short answers. Questions assessed event structure and organization, venue, how participants heard about the events, likes and dislikes, and overall rating (Appendix B). In addition, conversations with participants were part of assessing the event. Observational notes and comments or questions people had throughout the event were duly noted.

Most participants heard about the event through word of mouth (54.6%) and/or saw the flyer and signed up (36.7%), saw it on the library homepage (27.3%), or heard about it through email (27.3%). Note: participants were asked to select all that applied to how they heard about the event. One person said he heard about the event in class during class announcements from the professor.

In terms of rating the venue, 50% said it was ‘good’, 16.7% ‘very good’, and 25% said ‘excellent’. Comments included feeling “awkward” in the computer lab because they had to fit laptops next to the desktop computers. On the other hand, a participant liked the idea of having two spaces, one for mingling and eating and the other to “work seriously”.

The information presented before and after the Hackfest seemed to be ‘very clearly’ disseminated (58.3%), and 25% agreed it was ‘extremely clearly’ presented. One commenter said, “It was very well organized”. Overall, the Hackfest was rated as mostly ‘very good’ (41.7%) or ‘excellent’ (33.3%) and was described as “fun”, although another commenter said he wished “it attracted more talented hackers.”

A month later, a follow-up email was sent asking participants to fill out the survey if they had not done so already. They were also asked to provide their source code so that it could be openly accessible on the Hackfest website.

The final question in the survey asked participants to provide an email address if they were interested in assisting with the Hackfest planning in 2013-2014. Eight people including students and staff provided an email address for future contact. In the
upcoming fall semester, these eight people will be contacted to assist with the 2014 Hackfest.

**Discussion**

**Information literacy**

According to the York University Libraries’ Information Literacy Plan the purpose of information literacy is:

… to graduate critically-engaged, information-literate citizens able to fully participate in the information society at all levels – scholarly, personal, vocational and political. Our program, therefore, will focus on enabling students to develop information-seeking behaviours that transcend specific finding tools, to recognize the societal and disciplinary contexts of information, to think critically about the information they find and to let that information transform them (“Information Literacy”).

Just as universities have reached out to students through gaming (Pierce, 2009), the Hackfest allowed the library to connect with Computer Science and Engineering students through a programming event. The Hackfest was entertaining, interactive, yet also provided a space for learning and building lifelong skills. Therefore, it was an integral part of the Libraries’ information literacy goals at York University.

In order for information literacy to be successful, it must correspond to faculty course objectives and relate to discipline-based curriculum (Manuel 300). In fact, the Hackfest correlated to several courses in the CSE department and aligned with the Renaissance Engineer discourse as articulated at the Lassonde School of Engineering. The one-day event provided an opportunity for librarians to engage with students and assist them with their research throughout the Hackfest. The librarians and staff became a point of reference that could refer delegates to various resources including people, useful websites, and research data tools such as Dataverse.

Furthermore, the event fostered information and critical thinking skills. For example, throughout the Hackfest, students located resources to assist them with creating their apps and widgets. They found online instructional tools and utilized library IT staff to assist with idea development. The event helped students “learn the skills of transferring knowledge from the classroom to others in ways that are meaningful” (Steman and Motin 28). Several respondents in the survey acknowledged that the event helped to further develop programming skills learned in class and apply them in a situation that potentially imitates a work scenario or entrepreneurship experience.

To summarize, information literacy, and higher education in general, is evolving towards a hands on, collaborative and engaged learning discourse. Collaborative learning implies working in a group in which members have shared responsibilities. Therefore, learning is defined “as an active process” (Yerion and Rinehart 29). The Hackfest uses experiential learning to develop skills including problem solving, creating, constructing,
and social interaction. Similarly, information literacy for students in the sciences encompasses development of the skills that are also necessary for their future professional careers (Macklin and Culp 50). Thus, the skills established at the Hackfest go beyond coding and included lifelong competencies.

Open Access

The Hackfest was promoted as an open access (OA) event. As Davis-Kahl states, undergraduates are future graduates and faculty members who will have to acknowledge open access and scholarly communication (212). Thus, it is imperative that librarians as advocates for open access engage undergraduate students with open access pedagogy early in their academic career. Open access is described as resources available on the Internet and without financial or legal barriers to access (Sandhu and Jalandhar 11).

The Hackfest is an enjoyable way to approach students and faculty about open access. This was achieved during the event with discussions of open source code management tools such as GitHub. Participants were asked to post their source code on GitHub, as a common platform to share code on the Hackfest website (http://www.library.yorku.ca/cms/steacie/hackfest/sourcecode/). Not all participants were aware of the resource; however, a graduate student supported the idea since he used GitHub for code management. Furthermore, the GitHub discussion was a gateway to the conversation of archiving work and research data management. As mentioned earlier, a graduate student indicated he did not have a place to store data that he was using for code creation. It was at this point, Dataverse was suggested as an online tool for storing research data, and the student was referred to the Digital Assets Librarian.

Next year, plans for the Hackfest include working alongside the library Scholarly Communications Committee to assist with the promotion of OA, the creation of a Hackfest LibGuide, and greater discussion around research data management. Also, it would be interesting to create an open access repository that archives the various projects created annually at the Hackfest. With the addition of student and faculty organizers next year, OA will be further at the forefront of event promotion.

Faculty liaison

As per the Reference and User Services Association (RUSA) guidelines (http://www.ala.org/rusa/resources/guidelines), a liaison librarian helps to develop a working relationship with faculty to sustain relevant collections, identify user information needs, and to provide a space for dialogue to discuss library support (Thull and Hansen 529-530). It is important to be a familiar face in faculty meetings. After attending various meetings, the need for student involvement with the university community and a need for library support of the Renaissance Engineer philosophy became evident. The Hackfest fostered these needs and even more: it created an opportunity for greater relationship building with the faculty members of Computer Science and Engineering.
The Hackfest promotion included faculty meetings in Engineering and Computer Science. Here, faculty were encouraged to promote the Hackfest in classrooms or to attend the event themselves. Faculty partnerships were utilized to enhance student learning and a sense of community. Bennett and Gilbert found that faculty will see that events such as the Hackfest lead to a better student experience and enhance student learning as they encourage students to be involved in collaborative learning spaces in the library (137).

As mentioned in Thull and Hansen, who examined academic library liaison benefits, hosting events for students and faculty fosters a better understanding of the “services and resources available to them through the library and ultimately the fulfillment of their information needs” (532). Having liaison librarians present at the Hackfest allowed for librarian and student interaction, and thus, the librarian became a partner “in the pursuit of teaching and learning” (Thull and Hansen 534).

At the next Hackfest, more faculty presence will improve the support for the event. A couple of ideas to enhance participation include adding a grade value for participation, and faculty acting as mentors. As mentioned previously, the 2013 Hackfest benefited from Dr. Kozinski’s knowledge and experience. Faculty involvement adds credibility to the event and further instils a sense of community and creativity for participants, especially for the engineering students.

**Library as place**

The Hackfest pushed against some of the ingrained notions of library as place. Many students who participated did not realize the library did this ‘type of thing’ or that a library was located in the building, and that librarians had services to assist students with deeper research needs, such as research data management. Events similar to the Hackfest help transform the library from a place of services to a place of learning (Montgomery and Miller 234).

Some of the common perceptions of libraries include: a place to study, a place to take out books, and a librarian as someone who puts away books (Cohen). The library is often seen as a repository for academic books, but with the challenges of emerging resources, the library must establish itself as a physical place of relevance (Jackson and Hahn 430; Talve 494-5). Why isn’t the library “a room full of active, engaged minds” that create “a more collaborative environment where the students ask questions and make connections” (Cohen)? The Hackfest embodied just this: it sustained a room full of engaged minds, asking questions, solving issues, and collaborating. The first half of the Hackfest day was about organizing ideas and delegating the project tasks. There were opportunities for participants to hear the various hacking ideas, to engage in conversations with various project leaders, and to form groups.

Moreover, the Hackfest became a place for student outreach. Having librarians in the company of students was beneficial. One group that looked at faculty research consisted of a librarian on sabbatical, a Biology staff member, and an Engineering
student. It is important for library faculty and staff to develop relationships with students as it helps to change the perception of librarians, library as place, and promotes library services (Cohen; Montgomery and Miller 234). At a pub social after the Hackfest, a first year undergraduate IT student inquired about a career in librarianship after realizing her notions of what librarians do in the academic environment goes beyond books and shelving. Research indicates that students are likely to approach and trust familiar faces (Cohen). Therefore, if participants require reference assistance in the future, they are more likely to ask the now familiar librarians whom they met at the Hackfest. The Hackfest was partially about breaking librarian stereotypes and becoming a familiar face to students and faculty. Therefore, the Hackfest conveyed the library “as a sense of place” (Demas and Scherer 65).

Lessons Learned

The Hackfest pilot provided several lessons that contributed to understanding the steps necessary to setting up a hackfest (Appendix F). First, greater promotion is required to harvest more experienced programmers. Starting promotion earlier and acquiring a budget for professional posters may help to achieve this. Next year the plan is to have the event last two days instead of one. This will allow more time for groups to finish projects successfully as it was observed that more time was needed to complete projects. Another area of improvement would be workspaces that are free of clutter and more space in general to accommodate the expected increase in participant numbers. Assessment and feedback was done online; however, paper and online assessments will be considered next year so as to increase the response rate. Finally, registration and instruction for participants will continue with a similar organizational structure, as feedback was positive on the clarity of the information provided about and during the event.

In terms of organizing the Hackfest, it would be beneficial to incorporate and encourage participation by student and staff assistants. The event requires marketing/promotion, communication, website development, and refreshments, among other administrative activities. Alone this is a challenge. Therefore, next year, the plan is to divide the duties while the library acts as the main coordinator of the event.

Conclusion

Overall, feedback was predominantly positive. The Hackfest provided a space for informal and formal gathering that enabled students and faculty of various disciplines to interact and engage in something meaningful (Appendix G: The Steacie Library Dungeon Hackfest Infograph). Hackfests are an increasing trend in universities with a Computer Science department. In this scenario, the Steacie Library explored the idea of the library hosting such an event and creating a space for collective collaboration based on the open access and open source paradigms. Furthermore, the Hackfest challenged the librarian stereotype and established the library as a place of learning. It allowed for more meaningful relationships with faculty and students. These events, programs, or informal information literacy events encourage engaged learning and thus help to
sustain the relevance of the library. The Hackfest provided a welcoming, safe space for participants to share experiences and knowledge in the library as place.

**Works Cited**


Sandhu, Harmanpreet Singh, and Daviet Jalandhar. “Use of open access resources by the engineering students of Punjab (India).” International Journal of Library and


Appendix A: Event Poster

The poster advertises the Hackfest event. It was used throughout the Steacie Library, mainly at the front entrance and reference desk area. Additionally, it was posted around campus in the Science buildings and Digital Media departments as well as the main library, Scott Library.
Appendix B: “The Steacie Library Dungeon Hackfest Feedback Survey” Event Feedback Online Form

Total # of Participants: 25
Total # of Responses: 12 (Response Rate 48%)

How did you hear about this event? (Select all that apply)
YFile [1]        Radio Show CHRY FM [0]

How would you rate the venue/location?
Fair [1]          Poor [0]

How clearly was the information presented before and during the Hackfest?
Slightly clearly [1]      Not at all clearly [0]

Overall, how would you rate the Hackfest?
Mildly good [1]      Not good at all [0]

What did you like about the Hackfest?
Selected comments (11 total responses)
- Meeting new ppl with similar interests -the lunch and prizes
- One thing I really liked was that we all worked in groups. Though it was a bit shaky, it gave me a real experience of what it was like in an actual work environment.

What did you dislike about the Hackfest?
Selected comments (10 total responses)
- Not having enough time to complete the software

Name one way in which the Hackfest has contributed to your skills for school/work?
Selected comments (10 responses)
- Having to work in a team, to pitch your idea and get others interested in your project. It’s a very useful skill.
- I can see this helping me greatly in my future years of computer science because there will probably be more group intensive programming-projects.

How would you organize or improve the Hackfest for next year?
Selected comments (10 responses):
- Make it two days instead of one.
- Longer in length; Provide a list of fun problems to solve (of various difficulty) for those without their own ideas.
- I would try to get out a little more advertising done because I really only heard about hackfest from a friend.

Do you have a recommended theme for next year? If so, please describe.

Selected Comments:
- Social Networks
- ...perhaps something do with space, just because one of the really interesting ideas this year had something to do with space.

Are you interested in being a Hackfest Student/Faculty Planner next year? If so, please provide your name and email, thank you.
Yes [8] No [3]
Appendix C: Photograph of participants

Appendix D: Event Schedule

The Hackfest took place on February 21, 2013 from 9 a.m. to 6 p.m. The schedule below depicts the day’s tidings and important junctions.

0900        Breakfast and Caffeine
0915        Welcome
0930        Project Idea Presentations
1000        Teams form and Hack
1200        Lunch
1300        More Hacking – indicate 30 minutes left, 15, 10, 5, 1.
1700        Present Project Outcomes and Closing Remarks
1730        Head to Pub or Home
Appendix E: Projects Created

1. Conception
Conception is an open platform that anyone can manipulate and add to, similar to how Wikipedia works with writing encyclopedia entries. Conception works with writing code.

2. Class Optimizer
Class Optimizer is a program created to help students optimize their work/personal schedule with classes and school time.

3. CubeSat Software
CubeSat Software focused on creating software for a very small satellite based on the Linux Stamp available on Open Circuits.

4. Faculty Research Map
This group initiated a map and interactive diagram that depicted the connections of School of Lassonde faculty member research interests.

5. Open Data at York
The Web Librarian created a website that aggregates Open Data at York.

6. Virtual Whiteboard

7. York Website Interface
This project focused on user interface of the York University Website so as to make it easier to browse common applications and information.

8. YU Labs
YU Labs is the beginning of an android app that indicates to York students what individual computers are available in what library in order to facilitate location and use of computers for students.

9. Other
Other participants worked on individual projects.
Appendix F: Steps to Setting up a Hackfest

1. Decide on a theme for the Hackfest. What will participants hack on?
2. Decide whether the Hackfest will be a competition or non-competitive event.
3. Establish partnerships or ask for sponsors to help host the event. These can be corporate such as Google, local organizations or a university research and innovation initiative. Here, ask for financial assistance and mentorship presence.
4. Logistical questions: Where will the event be held in the library? How will this affect students already studying in the library? When will the Hackfest be held?
5. Create a logo based on the theme. Use this logo to create posters and a website banner.
6. Establish a website and registration form. Recommended to use Google Forms for registration set-up.
7. Organize a budget for food, drinks, swag/prizes, and mentor gifts.
8. Advertise event online and in-person at faculty meetings, classrooms, email various listservs. Also, utilize university communication methods such as LCD screens, university newsletter, and campus radio.
9. Create an assessment/evaluation form.
10. Day of event: Organize a schedule that allows for participants to learn about the various proposed projects, start forming groups, code, eat, and present final projects.
11. After event: Analyze evaluations, reflect on event and any ideas for improvement.
Appendix G: The Steacie Library Dungeon Hackfest Infograph

The infograph summarizes the event in terms of participants, ideas, and outcomes.