



SOFE 3490U - Software Project Management

Lab 4

Project: UberRUSH

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Introduction

In this lab, we are working towards UberRush and we firstly talked about risks associated with certain activities in the project and countermeasures that can be taken to mitigate the risks. Secondly, we talked about the resources we will have in our project which are mainly team members or teams which are assigned activities from the activity diagram we made in the pervious lab. And finally, we used our activity diagram and the risks and resources we documented and made a Microsoft Project Professional file which contains all the details we talked about in our project. In the file, each activity was turned into a task and given a duration, the risks with tasks and resources (team/team members) of the project were also provided.

Risks with activities

The following are some activities which might have some risks associated with them, countermeasures are indicated for the risks:

Gathering requirements:

Risk	Counter Measure
Conflicting requirements between stakeholders.	Analyze the requirements and views of the stakeholders carefully and conduct a vote or try to make the stakeholders come to a middle ground and agree on a specific requirement.
Invalid assumptions or misunderstanding requirements. This could happen when a stakeholder does not give a clear explanation of the requirement and the developer and employees working on the UberRush software would assume something else that is the opposite of what the requirement really is. This could lead to stakeholders being unsatisfied.	The individuals who are responsible for gathering requirements should involve developers and other individuals working on the software to make sure every requirement is understood clearly and any questions about requirements are asked to the stakeholders so they can clarify their assumptions.

Recruit staff:

Risk	Counter Measure
Insufficient number of skilled workers could result from recruiting staff. After staff is recruited, after development has started, some of the developers or employees might not be as skilled as assumed to be.	Make possible candidates go through coding tests, general knowledge tests and software knowledge tests.
Staff is not hired at a reasonable pace. This could happen if the recruiting staff is looking for perfect candidates so they keep on rejecting candidates who would have been able to deliver to the job but were a bit off of being the perfect candidates. This could result in more work, activities or tasks for already employed staff because there are jobs to still be filled.	Hire a staffing agency. They have knowledge of what kind of employees companies look for, so they send those qualified candidates for interviews so the number of candidates the recruiting staff interviews gets shorter and so more qualified candidates are interviewed and hired.
Unwanted behaviour may cause delays like if a developer that is hired is too confident and underestimates the duration that it will take to complete a task and he/she begins to waste time by leaving tasks for the end.	Have every developer show their progress either every day or every week to ensure that developers are on top of their tasks and focused.

Develop front end:

Risk	Counter Measure
The user interface should show data needed for UberRush to work so this activity depends on database to display addresses, name and information about clients. The front end could be working but information cannot be gathered because the front end depends on the database.	Develop the database first with dummy values so the performance of the front end can be clearly seen.
Components in the application may slow the site speed down. Image size could cause the site speed to be slow because	If application is slow because of image size, use a format which resizes images without making the quality worse like

it is bloated Javascript code.	PNG. Also, keep on testing the application and making sure the performance is good.
Not designing for different devices.	Ensure that the code supports all breakpoints and screen sizes. Make sure that the front end is responsive for different sizes like tablets, smartphones or newly introduced foldable smartphones. Use emulators to test for the designs responsiveness on different devices.

Implement database, logic and GPS capabilities:

Risk	Counter Measure
Georeferencing which is searching for an object or service on the map will be needed for UberRush to track and monitor the location of the package. This function could go wrong as the service could be tracking the drivers car instead of the package itself.	Test georeferencing or geolocation on several objects and determine the results.
Because of georeferencing/ geolocation, that must be used to get the addresses of senders and receivers, and the locations of the packages, there might be some risk with regards to security. Their data is on the database and that data is generating from the GPS.	Firstly, data must be clarified. By this we should clarify which data is very important and is personal information and then after, appropriate mechanisms must be implemented to make sure there is no risk of disclosure and that data is accessed only on a need-to-know basis. We should focus on a design that ensures address privacy and security.

Test and Fix:

Risk	Counter Measure
Tester might not test all components.	Test will make a list of all the necessary

	components to be tested for and keep track of that list. So if a QA team is testing the software, they conduct risk identification meeting for the software.
Dissatisfaction from developers if QA finds bugs and orders fixes to those bugs. The developer could be arguing that they did it right and there is no bug.	QA should collect evidence of the bug at all times to show developers. Because developers are under lots of pressure they might not believe they made a buggy software or make mistakes, they should be presented with evidence to the bugs they have introduced that must be fixed.

Deployment:

Risk	Counter Measure
Customer might dislike project.	Hold an open beta test for UberRush and collect feedback from customers on what could be improved and what they do not like.
The software may fail to give the desired results.	Fix the software and release patches for the software.
Many problems may arise if there is more than anticipated traffic going to one server at once from the same region. This would cause a major problem for clients accessing the UberRUSH service and may even cause delay for the drivers using the application.	Add additional servers for regions with heavy traffic and effectively manage them to balance the traffic for that region.

Resources

The following are the resources required for this project with descriptions of each:

Team members/ teams:

- Bob Silva- 'Project manager':
 - Will gather requirements
 - Recruit staff
- Front end developers team:
 - Develop front end
 - Fix any bugs that Quality assurance team has found
- Backend developers team:
 - Implement database, logic and GPS capabilities
 - Fix any bugs that Quality assurance team has found
- Quality Assurance team:
 - Test the applications
 - Report bugs and fixes that need to be made
- David Kim - 'Deployment coordinator':
 - Coordinate the deployment process

Time:

A lot of time is needed for this project. The staff will work from Monday to Friday 8 AM to 4 PM. If additional time is needed because of time crunch, employees must stay after 4 PM and may have to come at weekends. But we want to use as much time as we have and ensure no additional hours need to be spend by the staff to work so time must be managed wisely.

Money:

Funding is an essential part of a software project. A company can run out of money really quickly so it needs to be spend wisely. The money funding we expect is about \$1000000 which can be spread out in all resources according to the costs of the resources.

Materials:

Because this is a software project, we will need a lot of computing power. Reliable and relevant computer hardware must be equipped to ensure that this project development phase is smooth. Since this is only a software project, no hardware would need to be created, but servers would be needed in order to store clients information. Additionally, software license would be required.

Workplace:

This project will be developed in Ubers offices around Canada and America. This way we could use the resources and knowledge that UberEats and Uber already has.

Staff will be accommodated with free snacks all day and breakfast and lunch can be bought at the cafeteria. The cafeteria will also have coffee and tea.

The Microsoft Project Professional file is in the repository.

```
sequenceDiagram
    participant BobSilva as Bob Silva
    participant FrontEnd as Front-end developers team
    participant QA as QA team
    participant DavidKim as David Kim

    BobSilva->>FrontEnd: 
    FrontEnd->>QA: 
    QA->>BobSilva: 
    Note over DavidKim: 
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