

COMP3235 Software Project Management

2023-2024 Semester Two

Group Project (25%), Deadline is **9 April Tuesday 23:59 pm**

Please submit your work by group leader to LEARN@PolyU

Please name your project file as: **(Group Leader Name-StudentID-Group Project)**

Group 1 to 6 will present their work during class time in week 12. i.e., 10 Wed April.

Group 7 to 12 will present their work during class time in week 13. i.e., 17 Wed April.

Each group has a maximum of 30 minutes for presentation.

Every student must take part in the presentation.

Page Limit of the Project Report– No more than 30 (thirty) A4 pages

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Economic inequality is a huge issue. A recent study found that the world's 80 wealthiest individuals own as much as the entire world's poorest 3.5 billion people. The richest 1 percent of the world's population control half of the world's total wealth. Many individuals, corporations, charities, and government agencies have projects and programs in place to attempt to tackle this and other important global issues such as sustainability, but there are many opportunities to do more.

A grassroots group of college students has decided to work together to do their part in making the world a better place. The students are from many different countries, and several of them met at global conferences, through study abroad experiences, or on various Internet groups. Strategic goals of this group include developing skills for both college students and for needy populations, sharing information on existing products and services that promote economic growth and sustainability, and promoting entrepreneurship. Leaders of this group were reviewing some ideas for projects (all with a significant IT component) that they could do to support their strategic goals:

1. *Global Treps*: Many people are familiar with the television show called *Shark Tank* where entrepreneurs (sometimes called "treds") present their business ideas to a group of investors or sharks. Several colleges, high schools, and even elementary schools throughout the world hold unique versions of a shark tank like event. You believe that creating a non-profit organization with one central mobile-friendly website/application to assist groups in organizing these types of events would spark even more entrepreneurs throughout the world. You would plan to hold several shark tank like events during the term of the project and create a site and applications to help continue developing more global treps. This site/ application would include the following capabilities:
  - Provide guidelines and templates for running a shark tank type of event.
  - Accept donations from potential investors targeted toward specific schools or organizations wishing to host an event (similar to the popular **www.donorschoose.org** site where people can fund teacher's requests).
  - Accept ideas for needed new products or services.
  - Provide the ability for organizations to create their own custom site to solicit local participants and sharks, accept applications, and promote the winners as well as losers.

- Research ideas for a mechanism where a certain percentage of all donations and profits earned by contestants are donated back to the Global Treps organization.
  - Provide an online version of the events by showing videos of contestants and live reactions of the sharks while also getting live inputs and donations from viewers.
2. *Change the Laws Campaign*: Launch a global campaign to change laws to reduce further income inequality and promote social responsibility. This project would also involve creating a mobile-friendly website/application that would include information about current and proposed laws, allow discussions of potential ideas to change laws, organize people to contact appropriate lawmakers, etc.
  3. *Wealthy Unite*: Develop a system to enable the richest people in the world to provide their input on how they can make the world a better place. Provide information on what several people are currently doing (i.e., Bill Gates, Warren Buffet, famous celebrities, etc.) to promote philanthropy. Allow others to donate to suggested causes and recommend other ways to reduce economic inequality.
  4. *Global Smart Shoppers*: Develop a mobile app and website that recommends products and services produced by organizations that promote social responsibility. Customize the app so it works in any country in the user's desired language. Work with large companies that do not currently sell products or services in certain countries to expand to regions in need. Allow small companies to easily add their products and services to the shopping network.

### Question 1.

Summarize each of the proposed projects using a simple table format suitable for presentation to top management. Include the name of each project, identify how each one supports business strategies, assess the potential financial benefits and other benefits of each project, and provide your initial assessment of the value of each project. Write your results in a one-to two-page memo to top management, including appropriate back-up information and calculations.

## Case Continues

You have been selected as the project manager for the Global Treps project. You helped to run a local shark tank like event at your college last year as part of a class project, so you have a general idea of what is involved. The schedule goal is six months, and the budget is \$120,000. Your favorite professor, Dr. K., and a few of her associates have agreed to fund the project. Your strengths are your organizational and leadership skills.

You are a senior, live on-campus, and get free room and board by being a resident assistant in your dorm. Bobby, a computer whiz who funded a lot of his college expenses by building websites, will be your main technical guy on the project. He goes to your college and lives off-campus. Three other people will form your core project team: Kim, a new college grad now working for a nonprofit group in Vietnam; Ashok, a business student in India; and Alfreda, a student in the United States planning to visit her hometown in Ethiopia for two months in a few months. You will hold most meetings virtually, but you can meet face-to-face with Bobby and Dr. K. as needed. You have all known each other for at least a year and are excited to make this project a success.

You and your team members will do the work part-time while you finish school or work at other jobs, but you can use up to \$50,000 total to pay yourselves. You estimate that you will need another \$30,000 for travel expenses, \$20,000 for hardware and software, and the other \$20,000 will go toward organizing events, consultants, legal/business fees, etc.

Your goal is to develop a fully functioning website and test it by holding four events in four different countries. You'll make improvements to the site after those events, develop plans to scale it up, and recommend how to transition the project results into a successful business.

This system would include the following capabilities:

- Provide guidelines and templates for running a shark tank type event.
- Accept donations from potential investors targeted toward specific schools or organizations wishing to host an event (similar to the popular DonorsChoose.org site, where people can fund teachers' requests).
- Accept ideas for needed new products or services.
- Provide the ability for organizations to create their own custom site to solicit local participants and sharks, accept applications, and promote the winners as well as losers.

You decided not to include the idea of providing an online version of the event as part of the initial project as your sponsor and team decided that physical events would be most effective. You have also decided to limit the scope of this first project to provide the ability for 20 organizations to create their own custom websites. Your team members will screen the organizations and assist people in using the site to plan their events.

You plan to hold four shark tank like events within four months, using your team members abroad to help organize and run those events, plus one at your college. Your semester has just started, so you plan to hold your event at the end of the term. The project will fund refreshments for the events and prizes for the winners, with a budget of \$1,000 for each event. You don't think you'll get any donations via the new website before these events, but you'll try to have it set up to accept donations by the last month.

You will create some short videos to show people how to use the site and provide suggestions for holding the events.

After testing the site and getting customer feedback, you will make some changes and document recommendations for a follow-on project. You will also create a business plan recommending how to transition this project into a real business that can make a profit after two years.

Assume that you would pay for a new website and account through an online provider. Bobby would do most of the customization/programming for the site, but you would consider outsourcing or purchasing services to provide some of the capabilities like accepting donations and developing the short videos on the site. You would also buy a new laptop and Internet access for your three team members abroad so that they could share information with their contacts in those countries.

You and Dr. K. want to attend all of the events as part of the project, and you might include a full face-to-face meeting with the whole team if possible.

**Question 2.**

Develop a first version of a project scope statement for the project. Be as specific as possible in describing product characteristics and requirements, as well as all of the project's deliverables.

**Question 3.**

Develop a work breakdown structure for the project. Break down the work to Level 3 or Level 4, as appropriate.

**Question 4.**

Develop a strategy for scope validation and change control for this project. Write a short paper summarizing key points of the strategy.

**Question 5.**

Develop a schedule using Microsoft Project, explain the important properties of the schedule, such as resources and critical path.

## Case Continues

You are the project manager for the Global Treps Project, sponsored by Dr. K. Team members include Bobby, your IT guy; Kim, a new college grad now working for a non-profit group in Vietnam; Ashok, a business student in India; and Alfreda, a student in the United States originally from Ethiopia. You plan to outsource some of the work (e.g., purchasing laptops, developing a website feature for accepting donations, and creating videos for the website). Your schedule and cost goals are to complete the project in six months for under \$120,000.

You and your team are continuing your work on the Global Treps Project. Your project sponsor, Dr. K., has asked you to refine the existing cost estimate for the project so you can evaluate supplier bids and have a solid cost baseline for evaluating project performance. Your schedule and cost goals are to complete the project in six months for under \$120,000. You planned to use up to \$50,000 total to pay yourself and your team members, and your initial estimates were \$30,000 for travel expenses, \$20,000 for hardware and software, and \$20,000 for organizing four events, including consultants, legal/business fees, etc.

### Question 6

Prepare and print a one-page cost model for the project. Assume a labor rate of \$20/hour for yourself (the project manager) and team members (Kim, Ashok, and Alfreda). You will pay Bobby, your IT guy, \$30/hour. The project will fund refreshments for the four shark tank like events and prizes for the winners, at a cost of \$1,000 for each event. Using the cost model you created in above, prepare a cost baseline by allocating the costs by WBS for each month of the project.

### Case Continues

The Global Treps Project team is working hard to ensure they meet expectations, especially for the people who will be holding and participating in the four events. The team has a detailed scope statement, but you want to make sure you are not forgetting requirements that might affect how people view the quality of the project. You know that the project's sponsor and other key stakeholders are most concerned with getting people to use the new website, having successful events, and helping promote entrepreneurship across the globe. You also know that various geographic and cultural issues will need to be addressed.

### Question 7

Develop a list of quality standards or requirements related to meeting the stakeholder expectations. Provide a brief description of each requirement.

## Case Continues

Several people working on the Global Treps Project are confused about their responsibilities for providing content for the new website. The team members include you, the project manager, Bobby, the IT guy, and three people who will run shark-tank-like events in Vietnam, India, and Ethiopia (Kim, Ashok, and Alfreda). The activities in the WBS for the in-house development include the following:

- Guidelines and templates for events.
- Acceptance of ideas for needed new products or services.
- Custom site for 20 events.

You and your team also need to provide information for the videos that you are outsourcing. The purpose of these short videos is to show people how to use the site and provide suggestions for holding the events. That activity is Video creation for website in the WBS. You have selected the company that will do the outsourced video creation, and their main contact person is Angela.

### Question 8

Angela, the person in charge of the company preparing the short videos for your website, has suggested that you work together to prepare a detailed list of resources available to help prepare scripts and edit the videos they will create. You decide to use animations instead of real people in the videos, and Angela's company has a lot of experience in that area. Together, you decide that you will need someone to take on the roles of script writers, script editors, animators, sound experts, content editors, and technical editors. Angela and her team will do all of the animating, sound, and technical work and will provide guidance for you and your team to do the other work. To keep costs down and stay on schedule, you decide to plan for all of the video work to be done in 20 days, using no more than 240 total hours of effort, with about half of the effort from Angela's company. Prepare a resource histogram to estimate the number of hours by role for each of the 20 days. Document key assumptions you make in preparing the histogram.

### Case Continues

Several issues have arisen on the Global Treps Project. Ashok, your team member in India, broke his wrist playing tennis yesterday and cannot work on the project at all for three weeks. His work, which involves helping to edit the videos, starts in one week, so you need to reassign it to others.

Bobby suggests you use kanban boards to list all of the tasks for editing the videos and to track where they are in the workflow. Bobby, a techie and not known for being a good communicator, is the only person who's ever used kanban boards. You have not yet broken down the tasks into much detail and need more information from Angela, the contractor in charge of creating the videos.

Alfreda is having difficulties communicating with her main contact in Ethiopia, Dr. B. He is very busy all the time and does not use texting, Alfreda's preferred communications medium. He has also not communicated key information with students who could be candidates for their event, which is only a month away. Alfreda is not sure if he booked a room for the event yet.

### Question 9

Describe how you would communicate to Ashok and the rest of the team about Ashok's injury. What actions would you take? What communications medium would you use with different stakeholders? Furthermore, will this affect the overall time schedule of the project?



### Case Continues

The following people are involved in the Global Treps Project:

- You, the project manager
- Dr. K., the project sponsor
- Bobby, team member/technical specialist
- Alfreda, Kim, and Ashok, team members organizing events in other countries
- Suppliers for the domain name and site hosting, the donation acceptance feature of the website, and the video creation for the website (including Angela, the contact person at the video supplier)
- Instructors at each site helping to organize the events (including Dr. B. in Ethiopia)

### Question 10

Create a stakeholder management strategy for the project, focusing on members who are not on the project team, such as Angela and Dr. B. Make up names and personalities for the other two instructor contacts in India and Vietnam. Be creative in developing potential management strategies.

End of Project