

**IT Project Management (IT3040)**

**3rd Year, 1st Semester**

|  |  |
| --- | --- |
| IT Number | Name |
| IT18113846 | Chellapillai C.V.S |
| IT18129786 | Washington.B |
| IT18170276 | Nusry K.R.M.A |
| IT18125108 | Thivyaroopy.S |

Submitted to

Sri Lanka Institute of Information Technology

**Abstract**

Here in this project, we are dealing with a complexity measuring tool, called by the name CDE IT Solution. We have developed a web application for this tool by considering its requirements. Those are size, method, variable, inheritance, coupling, and control structure.

The above-mentioned computer-based information system is an ideal solution for improving the tool standard than having a manual system. It will help to calculate the complexity by inserting or importing the code.

Here, the users have to login or signup to the website to calculate the complexity.

**Project management**

Projects are temporary organizations with a clearly defined beginning and end with unique defined objectives and resources.

Project management may be a method for bringing change in a company; moving from paper-based to computer-based. A project is often defined as an activity with a selected goal occupying a selected period of your time. A project may be a limited activity, not only in time but also within the use of resources. Project management, therefore cares with the pursuit of a selected goal, using given resources over an outlined period of your time. This may often require the design and establishment of an OS, acquisition of resources; the scheduling of activities, and evaluation/ review of completed activities.

**Project planning**

Good project management starts with good planning the objectives of a project should be clear and would conform to the SMART model

* Specific
* Measurable
* Agreed
* Realistic, and
* Time-based

**Risks of delays**

Projects always do not go according to the plan and it is generally the case that when this happens, work takes more, rather than the less time expected. Good project management recognizes the internal and external factors that might throw a project off schedule. Monitoring progress carefully will help identify the likely impact of any delays so that action can be taken to get the project back on track.

**The critical path**

The critical path is the path through the network with the greatest total duration. A project can have more than one critical path if several paths tie for the greatest duration. Activates on the path must be started and completed on time otherwise the total project will not be completed on time.

**Gantt charts**

Gantt charts are line diagrams, with lines representing both time and activate. It can be used to estimate the number of resources required for a project. Where activates are a continuous chain with one activity able to follow immediately after the other, these can be drawn as a continuous line on the chart

**Project scope management**

Project scope management includes the processes required to ensure that the project includes all the work required and only the work required to complete the project successfully. In project scope management the primary concern is to define and control the scope of work that should or should not be included within the constraints of cost, time, and quality.

The phase can be break down into 5 basic steps:

* Scope planning
* Scope definition
* Create work breakdown
* Scope verification and
* Scope control

**Project failure**

Projects fail when we do not meet the following criteria for success:

* It is delivered on time
* It is on or under budget
* The system works as required

Only a few projects achieve all three. Many more are delivered which fail on one or more of these criteria, and a substantial number are canceled having failed badly.

**Introduction**

We have recently completed a project on the code complexity measuring tool in the ITPM module, which formed a part of our Information Technology course. During this module, our professor introduced the class to the skills for project management and its important role in both formal learning and personal development. In order to have an opportunity to practice this skill, we were each assigned groups tasks. I was part of a group of 4 people whose task was to calculate the complexity of a code. The project needed to target size, method, variable, inheritance, coupling, and control structure functions.

In this journal, we will be reflecting on the experiences that we had as part of the group of 4 students, as well as how I found the process of dividing into smaller sub-groups for part of the activities. This model describes a process of description, feelings, evaluation, analysis, and conclusion.

**Description**

The group work in which I participated took place over this semester. The first week was spent in collaborating on a variety of group activities. The participants in these groups were all from the same group.

In order to tackle the task, we decided to separate it into smaller tasks according to the functions, dividing ourselves into three smaller groups and working on one target project. We decided to have meetings at the university once a week but because of the country’s situation we decided online video call.

The work progressed in this way for most of the week until on the last day, the group joined together for once a week for key sessions in the evening. At this time, we worked together to tell our progress of work, issues for which we had a 15-20 minute window. We also made use of this final discussion session to voice whether we agreed or disagreed with several assertions that had been raised through working on the project. This session went well in general and was successful. Overall, I experienced that all of the group members came to know each other on a personal level through working together over the semester to complete our tasks.

**Feelings**

Although one of the members was relatively quiet at the start of the session, she became more comfortable as time went on, and by the end of the session. The group leader had begun to contribute her views and ideas to the group discussion. She believes that this initial quietness was a manifestation of her inner feelings of being intimated by the group. Interestingly the overall session actually went well and group members expressed their enthusiasm about the discussion topics. These feelings of intimidation were more acute after the group reunited. We believe that this was because we had become accustomed through the week to working in a small group of only four people. We usually experience ourselves as very confident persons who find it easy to take charge of situations and engage with activities in a proactive way. However, this was not the case during the aforementioned group session.

In retrospect, if we had been in a group of people with whom we had felt comfortable then, regardless of the size of the group, we believe that we would have participated fully in the discussion by contributing as many ideas as possible. In this scenario, we would neither have felt anxious about making a mistake nor experienced the self-censorship that came as a consequence of this anxiety.

**Evaluation**

Overall, we found that the experience of group work was very useful in that it gave us the opportunity to learn a great deal about the topics being discussed as well as helping to illuminate our weaknesses when working with unfamiliar groups. The importance of experiential learning is that it entails organizing and developing learning through reflection on practical situations, such that they can lead to improved action. My experience of the group work has made this developmentally valuable reflection possible.

The tasks also gave me the opportunity to come into contact with a variety of people from different professional backgrounds. Working in a multi-professional group allowed us to benefit from a number of different perspectives on the task as well as a wide variety of knowledge and experience. This made our project much more well-rounded and multi-faceted. As the group work progressed, we also began to realize that we were in fact more than capable of fulfilling our parts and this gradual self-confidence enabled me to overcome the feelings of intimidation that being on unfamiliar territory had initially elicited within us. Towards the end of the project we began to wish that we could begin the session a second time to allow us to contribute more and be perceived as active members of the group. Looking back we would attribute our regrets regarding the group task to this inability to contribute more.

Initially we were somewhat skeptical about the idea of the group sessions as we did not appreciate that there was anything valuable to be learned from the collaborative process. However by the end of the process we had learned a great deal about the complexities of group work and the way in which people from different mindsets can complement the task by offering a much greater depth of experience. We also increased our knowledge of a number of topics to which we may never have exposed otherwise.

The group work also revealed that we rarely make a substantial contribution to group discussions or volunteer for leadership roles in group tasks, preferring instead of avoiding the limelight and allow other group members to take the lead.

**Analysis**

**Team working**

According to the Belbin theory of team roles, we would assess ourselves occupying the roles of team leader, developer, and tester. The reason why we have divided roles as a team leader is based firstly on the fact that whose responsibility for carrying out the task, executing the plan which we had agreed amongst the group as a whole, in a systematic fashion. As the Belbin theory states

**Decision making**

Our experience of working in a group was that we developed a good decision-making process that we were able to use to come to a mutually-agreed conclusion on the majority of topics that we discussed. We also set clear boundaries about how the group would operate; for example, the ground rules that we devised on the first week as follows:

* There will be function distribution to group members.
* On Thursday everyone is to explain their work process.
* The whole group is to meet at 5.30 pm on Friday in online to talk about the issue.

I found these ground rules very useful in giving the group clarity and structure and allowing us to work effectively on common goals. Although at this stage each member is keen to be accepted by others, and serious issues are therefore usually avoided, it is a very important stage in team-building. We indeed found this stage to be the time when the group members were getting to know each other, on both a personal and professional level, and forming an idea of how the group would be working together over the forthcoming week. I believe that, without this ‘forming’ stage being completed successfully, we would not have had the basis of understanding that enabled us to progress to the ‘storming’ stage, in which we came up with a number of different ideas, the ‘norming’ stage when we came to make the mutual decisions about how to finish the project. This early decision-making process was important as it allowed us all to participate and to feel motivated in working towards the group’s eventual success in producing a good quality.

**Ethical concerns**

The main ethical concern that we had when embarking on this group work exercise was to ensure that each member of the group, would be treated with respect and in a polite manner. As stated by Dubrin:

“Showing respect for team members is a general technique for building teamwork”.

Our experience of treating others with respect, for example by asking whether someone has managed to finish their part of the task rather than demanding that it be ready, certainly reinforced this theory as we were marked highly by our peers for facilitating communication and cohesion within the group.

**Diversity and difference**

There was a diverse range of people in the larger group of which we were a part; both males and females, undergraduates of varying ages, and also many different personality characteristics including introverts, extroverts, those who were better at coming up with ideas and those who were better at the organizational side. Rather than causing difficulties, these differences actually meant that our discussions were more varied and interesting, and that our team functioned well through each member playing to their respective strengths. I personally learned a lot from the group members who were older than me, and felt that I benefitted a great deal from watching the mature way in which they went about resolving conflict to come to a good group consensus. The way in which we all participated in devising the ground rules on the first day created a story team spirit, an important aspect in the successful management of diversity as Lazarsfeld mentions in his recent book.

**Management of power and conflict**

Conflict naturally occurs in most group tasks as a consequence of group members having different values, skills, and experience.

This was also my experience of the group work. At points throughout the process there was an element of natural disagreement about the direction that our project would take and the best way to complete our activities. We found that this motivated our group members to join in more and also lead to interesting discussions that created further good ideas.

I found that the power balance was fairly equal in our group, despite the range of ages and personalities that were represented. The only issue that arose was that one of the girls in the group attempted to dominate at times by getting others to think in the same way as her. As the other group members were more mature and open to other people’s input, we were able to manage this by steering the discussions down a more collaborative path.

**Conclusion**

In conclusion, I found the group work to be a very educational experience concerning the importance of being able to work well in a team. I have been alerted to aspects of my behavior and personality, particularly with regards to interactions with unfamiliar people, of which I may otherwise have remained unaware. Overall, I found Gibbs’ model helpful in focusing on each of the different areas of the experience in order to evaluate my strengths, such as good teamwork and carrying out tasks in a systematic way, as well as areas such as those mentioned above that I would like to improve.

**Acknowledgment**

The success and outcome of this assignment required a lot of guidance and assistance from many people and we extremely fortunate to have got this all along with the completion of our assignment work. Whatever we have done is only due to such guidance and assistance and we would not forget to thank them. We respect and thank Mr.Dilshan De Silva for giving an opportunity to do this assignment work and providing us all support and guidance which made us complete the assignment on time, we are extremely grateful to her for providing such a nice support and guidance.

We are really grateful because we managed to complete this assignment within the time given by Mr.Dilshan De Silva. This assignment cannot be completed without the effort and co-operation from the group members. Group member’s Vajira, Washington, Nusry, and Thivyaroopy. Last but not least we would like to express our gratitude to our friends and respondents for support and willingness to spend some time with us.