## ASSIGNMENT 1

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| **Qualification** | BTEC HND Diploma in Computing and Systems Development | | |
| **Unit number and title** | **Unit 6: Managing a Successful Computing Projects** | | |
| **Submission date** |  | **Assignment submitted (1st)** |  |
| **Re-Submission date** | 10/25/2020 | **Assignment submitted (2nd)** |  |
| **Student name** | VÕ NHỰT HUY | **Student ID** | GCC18169 |
| **Class** | GCC0701 | **Assessor name** | Truong Minh Thai |

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| **Learner declaration:**  I certify that the work submitted for this assignment is my own and research sources are fully acknowledged. | | | |
| **Learner signature** |  | **Date** | NHUT HUY |

**Grading grid**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| P1 | P2 | P3 | P4 | M1 | M2 | D1 |
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| **Assignment title** | **Assignment 1: Software project management stages.** |
| In this assignment, you will have opportunities to provide evidence against the following criteria. Indicate the page numbers where the evidence can be found. | |

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| --- | --- | --- | --- |
| **Assessment criteria** | **Expected evidence** | **Tas k no.** | **Assessor’s Feedback** |
| **LO1.** Establish project aims, objectives and timeframes based on the chosen theme**.** | | | |
| **P1** Devise project aims and objectives for a chosen scenario. | 1. Definition of project management. The key stages of project management. The advantages of project management. 2. Definition of project aims and objectives for a given scenario. | 1 |  |

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| **P2** Produce a project | 1. Determine the requirements of the website in the given scenario. 2. The work breakdown structure – what it is and how it is used for project management planning. What is a Gantt chart and what is the value of using a Gantt chart?   Produce:   * 1. Work Breakdown Structure   2. GANTT chart   3. Critical Path Method.   for website requirements in given scenario. |  |  |
| management plan that |  |
| covers aspects of cost, |  |
| scope, time, quality, |  |
| communication, risk and  resources. | 2 |
| **P3** Produce a work |  |
| breakdown structure and |  |
| a Gantt Chart to provide |  |
| timeframes and stages |  |
| for completion |  |
| **LO2.** Conduct small-scale research, information gathering and data collection to generate knowledge to support the project**.** | | | |
| **P4** Carry out small-scale research by applying qualitative and quantitative research methods appropriate for meeting project aims and objectives | Applying qualitative and quantitative research methods appropriate for meeting project aims and objectives | 3 |  |

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| --- | --- | --- |
| **Assessment criteria** | **Expected Evidence** | **Feedback**  **(note on Merit/Distinction if applicable)** |
| Merit descriptor No. (M1) | The scope of the project. Identify which factors affect the implementation of the project e.g. the time required and cost.  Decide on the key milestones of the project |  |
| Merit descriptor No. (M2) | Evaluate the accuracy and reliability of  different research methods applied |  |
| Distinction descriptor No. (D1) | Critically evaluate the project management  process and appropriate research methodologies applied |  |

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| Assessor’s Signature: |  | Date: |  |

Summative feedbacks:

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| --- | --- |
| **Unit Number and Title** | **Unit 6: Managing a Successful Computing Projects** |
| Academic Year | 2020 |
| Unit Tutor | ThaiTM2 |
| **Assignment Title** | **Assignment 1:** Plan and conduct a small scale research activity |
| **Issue Date** |  |
| Submission Date |  |
| IV Name & Date |  |

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| --- | --- | --- |
| **Learning Outcomes and Assessment Criteria** | | |
| **Pass** | **Merit** | **Distinction** |
| **LO1.** Establish project aims, objectives and timeframes based on the chosen theme**.** | | **LO1 & 2**  **D1** Critically evaluate the |
| **P1** Devise project aims and objectives for a chosen | **M1** Produce a comprehensive project management plan, |

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| scenario.  **P2** Produce a project management plan that covers aspects of cost, scope, time, quality, communication, risk and resources. | milestone schedule and project schedule for monitoring and completing the aims and objectives of the project. | project management process and appropriate research methodologies applied. |
| **P3** Produce a work breakdown structure and a Gantt Chart to provide timeframes and stages for completion. |  |  |
| **LO2.** Conduct small-scale research, information gathering and data collection to generate knowledge to support the project. | |  |
| **P4** Carry out small-scale research by applying qualitative and quantitative research methods appropriate for meeting project aims and objectives | **M2** Evaluate the accuracy and reliability of different research methods applied. |  |

The Scenario: **The future of IoT has the potential to be limitless**

The Internet of Things (IoT) is the term that refers to the ever-growing network of physical objects with embedded sensors that can connect together via the internet allowing

**Assignment Brief**

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| communication to occur between these objects and many other Internet-enabled devices and systems.  IoT is quickly becoming a necessary aspect of people’s daily lives. Physical items can now sense and collect data that can be controlled through digital and smart technology. The IoT extends internet connectivity beyond traditional devices like desktop and laptop computers, smartphones, and tablets to a diverse range of devices that can utilize embedded technology such as security systems, thermostats, cars, electronic appliances, lights, medical equipment, etc. These devices often called "connected" or "smart" devices, can talk to other related devices (machine-to-machine (M2M) communication) and act on the information they get from one another.  **The future of IoT has the potential to be limitless**. The potential is not just in enabling billions of devices simultaneously but in leveraging the huge volumes of data which is generated.   * What could the future look like? Investigate the potential future developments which the IoT can help advance e.g. automate manufacturing, smart agriculture, smart aquaculture, medicine and healthcare, virtual world, AI, machine learning etc. |
| **Assignment Guidance** |
| **Task**  You are working in a venture capital firm, looking for investment opportunities in projects that research and develop IoT devices or systems applying in the fields of manufacturing automation, smart agriculture, smart aquaculture, medicine and health care ... As a member of Research and Development department, you have been assigned a mini-project to find out the potential future developments of IoT can help automate manufacturing, smart agriculture, smart aquaculture, medicine and healthcare, virtual world, AI, machine learning etc.  In this project, you must recognize that project work is reliant on gathering information/data that can be analysed. The scale of the project means that there must be |

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| time for both primary and secondary research. An advised model would be to use secondary research to provide a context to conduct and interpret primary data collection. The project could then yield data/information that could be compared with the findings of secondary research information.  You need to do primary research (both qualitative and quantitative research) and secondary research to find out that impact and conduct a report for your research. Even it’s a mini- project, you must apply project management (PM) techniques such as project charter with aims, objectives, cost etc. As for time management, you need to produce WBS and Gantt chart with reasonable tasks and time. A project logbook is required to provide evidence of the project development process and ongoing reflection for every week. This logbook will be needed later for your reflection and evaluation in Assignment 2. As part of QA (quality assurance) policy, in the report you also need to critically evaluate the PM process and appropriate research methodologies applied.  Your report must have an introduction stating the project aims and objectives. This must be followed by a copy of your project management plan. Your plan should show the milestones when you will review with your tutor your ongoing progress so far. You will submit your logbook which shows how you |

*Format:* The submission is in the form of an individual written report that shows how you have managed the project. This should be written in a concise, formal business style using single spacing and font size 12. You are required to make use of headings, paragraphs and subsections as appropriate, and all work must be supported with research and referenced using the Harvard referencing system. Please also provide a bibliography using the Harvard referencing system.

**Submission Format**

*Submission* Students are compulsory to submit the assignment in due date and in a way requested by the Tutors. The form of submission will be a soft copy in PDF posted on corresponding course of <http://cms.greenwich.edu.vn/>

*Note:* The Assignment *must* be your own work, and not copied by or from another student or from

books etc. If you use ideas, quotes or data (such as diagrams) from books, journals or other sources, you must reference your sources, using the Harvard style. Make sure that you know how to reference properly, and that understand the guidelines on plagiarism. *If you do not, you definitely get fail*

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**P1.** Devise project aims and objectives for a chosen scenario.

## Project management introduction

* + The need for project management has been driven by businesses that have realised the benefits of organising work around projects and the crucial need to communicate and coordinate work across departments and

professions. One of the first major uses of project management, as we know it today, was to manage the US space programme. The government, military and corporate world have now adopted this practice.

* + Many organisations do not employ full time Project Managers and it is common to pull together a project

team to address a specific need. Taking a role in a project team can be an excellent learning opportunity and

can improve a person’s career profile.

1. Definition of project management
   * Project management is the application of processes, methods, skills, knowledge and experience to achieve specific project objectives according to the project acceptance criteria within agreed

parameters. Project management has final deliverables that are constrained to a finite timescale and budget.

1. Definition of software project management
   * A Software Project is the complete procedure of software development from requirement gathering to testing and maintenance, carried out according to the execution methodologies, in a specified period

of time to achieve intended software product.

1. The key stages of project management:

* The five stages of project management are:
  + **Project Initiation:** The first of the project management stages is all about giving the project a relatively broad definition and establishing whether or not it is feasible. The stakeholders

responsible will usually use two methods to decide whether or not the project gets the go-ahead:

* + - Business Case Document: This will set out the justification for the project in terms of what the organization need, how it will benefit them and produce potential financial profit.
    - Feasibility Study: This document examines the resources required for the completion of the project and compares them to what is available to the organization. In this way, the project is judged on its schedule and expense and whether the company is the right one.
* If these two tests are passed by the project, the next step of the initiation process is the creation of a project charter or project initiation document (PID) to provide an overview of the aims of the project, the stakeholders involved and its business case.
  + **Project Planning:** In the project planning stage, a more in-depth outline of the project’s goals

and requirements is created. This is where a project manager really brings their skills to bear.

Project planning includes:

* + - Defining the scope of the project
    - Identifying what exactly needs to be done
    - Finalizing the timeline for deliverables
    - Organizing a work flow schedule
    - Assessing and arranging necessary resources
  + **Project Execution:** This is the beginning of the creative stage, where the carefully laid project plans are turned into tangible deliverables. There will usually be a kick-off meeting to give

everyone an overview of what their objectives are.

* Project execution includes**:**
  + Create individual task sequences
  + Procurement of necessary resources
  + Assign detailed tasks to each person
  + Perform mission
  + Deliver products delivered within the term
  + Update project progres
  + **Project Monitoring**: The project manager is a key point of contact between the project team working and the other stakeholders who are more removed from the day-to-day details of

what’s happening. For this reason and to make sure that everything is progressing as it should, a project manager needs to be able to effectively measure and communicate project progress.

* + **Project Closure:** This is the last of the project management stages, when the final deliverables

are handed over or go live. This stage provides you, your team and stakeholders with an

opportunity to evaluate how successful the project was and what lessons were learned during the process. It is also wise to create an ongoing process to capture this knowledge and formally and feed it back into your project management system

## The advantage of project management

* The first and foremost advantage is the fact that a particular project is handled by separate project manager as he or she will concentrate only on that particular project that makes it more likely to achieve success.
* Another pro of project management is that it helps the company in achieving efficiency when it comes to capital, labor, and other operational related expenses as it keeps a close watch on all the activities of the project which in turn helps the management in identifying the areas which are revenue leaking and helps the company in saving lot of capital.
* It helps the company in developing managerial qualities in talented people by assigning them first small projects and then big projects which in turn create a favorable atmosphere in the company where people know that there is ample scope for growth.
* Project management creates a system whereby workflow is measured and accounted for, ensuring that resources are used judiciously in fulfilling the goals of the project. This type of planning establishes

expectations for staffers, provides clear directives and builds in procedures for quickly addressing unexpected outcomes.

* Managing projects from start to finish can help control project costs and help a project manager retain control over his budget, identifying problems or issues before they turn into roadblocks. This can also help a business ensure on-time delivery, retain satisfied customers and project an image of competence and professionalism.
* Effective project managers make determinations about appropriate staffing and team formation in the early stages of project planning. This can help ensure the right people with the most appropriate skill sets are assigned to tasks within the project, allowing the company to use its human resources judiciously and effectively.

1. Projects Proposal

* Scenarion: Influence of digital technologies on human life and solutions to improve in the transport industry in using those technologies

 Introduction:

* + The project report is the analysis of the data research and most appropriate strategy for the data research. The report signifies various steps of the project planning like analysis

of data, research of the data and also signifies the importance of choosing the most appropriate method of data collection of the project. The project report also outlines the different aspects of future studies, the project timeline and the future scope of the project, and also highlights the different processes of data collection and outlines the related guidelines for future project studies. The project report also describes the structure of the workforce and different departments, from project planning to project completion.

 Project Aims and objectives:

* + Project objectives and objectives are the main part of the project. In this project, the venture capital firm, wants to make more profits and also wants sustainability in this

highly competitive market. Based on their desired criteria, the project is directed towards and the goals are decided. The company also wants to implement Artificial Intelligence in their tech scenario. Based on the scenario above, the goals and objectives of the project are:

* + - Profits maximization is one of the key areas of every business organization. On the financial side, profit maximization is where the earnings per share are calculated. One of the main goals of this venture is to maximize profits. Though profit maximization is the traditional approach and it describes decisions that come to light about making more profits.
    - Sustaining in this highly competitive market is another important area of every organization. The venture organization also want to implement the Artificial Intelligence on their technological implementation.
    - Improvements and Changes to the systems: Another aim of the project is to improve the existing systems and operational tool of the consultancy organization. The consultancy organization wants strengthen the customer base and also want to restructure the existing rules and policies in their various domains.
    - Better productivity: One of major aims of the project is to ensure the better productivity. The consultancy firm is getting various customers from different domain. These sectors are from in the transport industry. Managing all these sectors ensure the high productivity.
    - Technological implementations: Another aim of the project is to build and update the technological setup. The consultancy firm increases their operational area into other sectors as well. Working under different sectors also has the need to change technological implementations. Changing the existing technological setup is another aim of the project.
    - Better productivity: One of major aims of the project is to ensure the better productivity. The venture firm is getting various customers from different domain. These sectors are from health, logistics and manufacturing sectors. Managing all these sectors ensure the high productivity.

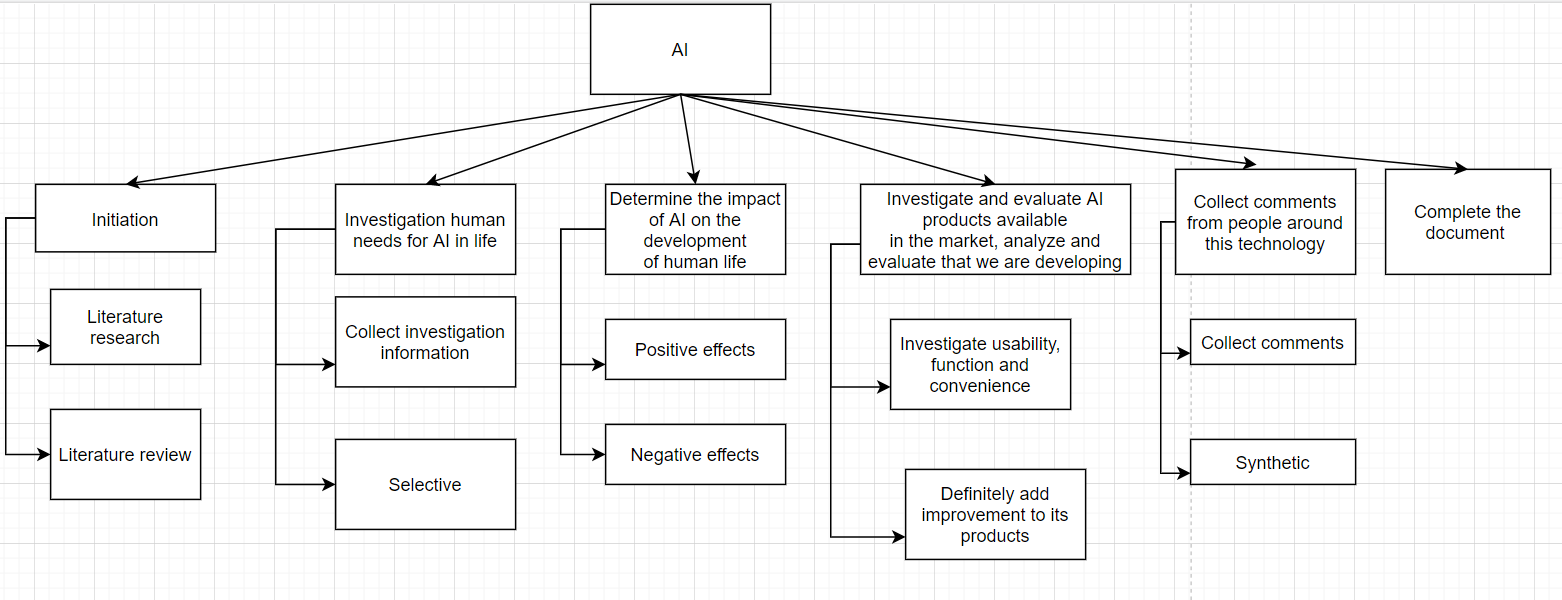
**P2** Produce a project management plan that covers aspects of cost, scope, time, quality, communication, risk and resources.

|  |  |
| --- | --- |
| Cost | 100,000$-135,000$ (Approx). Average Minimum value product 38,000$ - 80,000$.  Prototype implementation phase $25,000 |
| Scope | The scope to get better productivity and  strategic implementation |
| Times | 40day - 49day |
| Quality Communication | Ensure better communication with all the stakeholders and managers and also increasing the level of communication level among various departments. (Manufactures,  Project guides, project managers, labors) |
| Risk | The risks are implementation of Algorithms (high quality required a round of turning sessions.  Another risk issue is the Database issues which are mainly external database. |
| Resources | Project Database, Softwares |

* Project Database, SoftwaresIn this table or project management plan is the detailed guideline procedure that has a different components like cost of the project, the risk factor and the timeframe that needed and also the future scope or possibilities of the project .Under the cost sector various cost that occurred on different phases like Prototype implementation phase, Average minimum value product phase are discussed. The scope denotes the future possibilities of the project. The implication of new strategy can be useful as a future guide. The time frame signifies the possible time period needed. The risks are the database issues and the high cost of implementation are dignifies. Resources are the project database and the software that needed are discussed.

# P3 Produce a work breakdown structure and a Gantt Chart to provide timeframes and stages for completion.

 Work breakdown structure



* Action planing

|  |  |  |  |
| --- | --- | --- | --- |
| Tast Name | Duration | Start | Finish |
| Literature research | 10 day | 9/11/2020 | 21/9/2020 |
| Investigation human needs for AI in life | 7 day | 9/22/2020 | 9/29/2020 |
| Determine the impact of AI on the development of human life | 8 day | 9/30/2020 | 10/8/2020 |
| Investigate and evaluate AI products available in the market, analyze and evaluate that we are developing | 10 day | 10/9/2020 | 10/20/2020 |
| Collect comments from people around this technology | 8 day | 10/21/2020 | 10/29/2020 |

 Gantt charts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Task | Day(5-10) | Day(5-7) | Day(5-8) | Day(5-10) | Day(5-8) |
| Literature research |  |  |  |  |  |
| Investigation human needs for AI in life |  |  |  |  |  |
| Determine the impact of AI on the development of human life |  |  |  |  |  |
| Investigate and evaluate AI products available in the market, analyze and evaluate that we are developing |  |  |  |  |  |
| Collect comments from people around this technology |  |  |  |  |  |

* Requirement analysis:
* Request:
* Driverless vehicle AI technology has been successfully developed → The system must be managed via mobile phone for convenient remote management by users.
* There are automatic doors when someone arrives → Automatic doors may be required for a certain time and must be in the system.
* Ease of use and maintenance of the system → Any system or machine must be easy to use and easy to repair and maintain. This is a basic requirement when the user is not an expert to use it.

**P4 Carry out small-scale research by applying qualitative and quantitative research methods appropriate for meeting project aims and objectives**

1. What is qualitative research?
   * Qualitative research method is a form of research often used to explore, find out ideas and views to find insight into problems. In addition, this method can be used to detect future customer trends.
   * The modes of data collection for qualitative research are quite varied and often do not have a specific structure like quantitative research. Some of the methods can be mentioned such as focus group,

personal interview and observation. Samples of this method are usually small and are more carefully selected.

* + Qualitative research usually approaches research subjects in the most natural way, to ensure that the

behaviors, opinions and opinions given by research subjects will be most objective and accurate.

1. What is quantitative research?
   * Quantitative research method is the collection and analysis of information on the basis of data collected from the market. The purpose of quantitative research is to draw market conclusions through

the use of statistical methods to process data and data.

* + The quantitative research is appropriate in research on the attitude, opinion, and behavior of the surveyed person. Quantitative results from one sample group will be generalized onto a larger sample

population.

* + Methods for collecting quantitative data are often more structured than collecting qualitative data, including many different forms of surveys such as online surveys, paper surveys, mobile surveys, and

mobile surveys. mail or email, ...

3. Implementation stage: (Front panel)

* The implementation phase involves implementing details of your project charter to deliver your products or services to your customers or internal stakeholders.
* Project execution usually consists of three main components: the processes of finding, implementing, and delivering the product to the consumer.

4. Efficiency of quantitative research methods and qualitative research methods:

* Quantitative research method: Quantitative analysis approach lets us collect data through product enhancement surveys, in addition, it can also be used for cost statistics and forecasting, spending fairly on capital use.
* Qualitative research method: Quantitative analysis approach lets us collect data through product enhancement surveys, in addition, it can also be used for cost statistics and forecasting, spending fairly on capital use.

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