SCS301: RESEARCH METHODS IN COMPUTING

Project Proposal Guidelines

Introduction to Projects

- You will be expected to select a project,
- Define the problem,
- Do some study (Literature review),

Project Proposal

- What is a Proposal? A proposal is a statement or document that clearly communicates your idea, intentions, plans or scheme.

- A proposal puts forward for consideration ones plan of intent.

- It is meant for evaluation by a supervisor

Project Proposal

- An effective proposal should clearly state:
  - What the project is all about – Topic
  - What made you choose the area – Problem
  - What relevant information gave you the idea – Literature review
  - How it will be carried out - Methodology
  - How long it will take to complete
  - How much it will cost

Topic selection

- This the starting point. Before you write your Project Proposal, you need to select the topic or area you are interested in such as Mobile Apps development, Knowledge Base Systems. Web Services etc.

- It is from this topic or area of study that you zero into formulating a Project.

Project Proposal Structure

- Generally a project documentation consists of three main parts:
  - Introduction
  - Literature Review
  - Methodology

- The three sections form the three chapters of project proposal.

- In addition, you must have budget, timelines, and references

General Proposal format

- Title Page:
  - Project Title, Registration details, Supervisor and date submitted

- Table of Contents

- Chapter 1: Introduction
  - Background
  - Problem Definition
  - Objectives

Report format cont…

- Project Justification
- Chapter 2: Literature Review
- Chapter 3: Methodology
  - System development methodology to be used
  - Schedule
  - Budget
- Bibliography/References

Project title

- Project title refers to the label or tag of your project work. It gives a quick summary of the key idea or topic in your project.

- The project title should be:
  - Brief and specific (Less than 12 words and informative)
  - In line with set objectives
  - Clear

Chapter 1: Introduction

- The introduction consists of the following subsections
- 1.1 Background
- 1.2 Problem Definition
- 1.3 Objectives
- 1.4 Project Justification

Background

- Provides general overview of the practical reality that might have influenced you to develop interest in that area. It is a basically a summary of the literature review.

- Explain how it was, how it is now and how the past or present may have contributed to the problem you wish to solve

Problem Definition

- This is a statement (s) describing the nature of the problem. The reader is made aware that a definite problem or issue needed to be solved.

- The problem statement indicates the need for the solution to the problem hence your project.

- The statement should capture the essence of the study, how the unsolved problem came about and how you intend to solve it.

Problem Definition cont..

- Thus spend substantial time defining the problem. Imagination and insight that goes into problem definition determines the value of project.

- In stating your problem, think of practical considerations e.g. cost, time, skill and availability of relevant recourses such as hardware, software and data

Project goal

- Project aim or goal refers to what the system developer strives to achieve i.e. purpose of developing the system.
  - It is a general statement of what the developer aims to accomplish by the end of the project.

Specific objectives

- Unlike aims, objectives are intensions stated in measurable terms.

- They constitute the means by which the aim of the project is to be achieved.

- Objectives should be:
  - Specific, Measurable, Attainable, Realistic and Time bound (SMART)
  - They should be outlined in an ordered list 1, 2, 3 --, a, b, c----
  - They should not be too many (between 3 and 5)

Justification

- Justification or Significance of study explains why the project is important from more that one perspective.

- For example in Kenya there is no company that is currently offering integrated online payment gateway. Therefore the system we are developing will be the first of its kind and will…..

Scope

- Scope briefly explains the limitations of the project. What will be covered and what will not, based on existing constraints.

- List any assumptions and constraints that limits your scope such as schedule, budget, resources, software to be used, skills/techniques to be employed and product interfaces to other products

Chapter 2: Literature Review

- Literature review refers to gathering relevant information by going through published and unpublished materials available on the topic of interest.

- Such materials include books, journal papers, web pages, magazines etc.

- It a critical look at existing related works in order to get an insight on how to go about the problem; pinpointing strengths and weaknesses.

Chapter 2: Literature Review

- Literature review refers to in-depth study of the existing works or research in the area of interest.
- You gather relevant information by going through the materials :

    - Review primary sources such as similar projects in library or online
    - Review secondary resources such as Books, Magazines, Websites etc.

- Read the most recent articles first and remember to write down the reference

Chapter 3: Methodology

- Explains the methodology to be employed in developing the system.
- Examples include:
  - SSDM using Waterfall
  - OOAD or Unified Process etc..

Resources used

- List all resources required to develop the system such as software, hardware etc

- You may state the approximate cost of each and the total amount used on the project.

Timeline

- You must have a timeline/schedule, preferably in the form of a GANTT chart.

- The timeline should show your own activities divided into categories such as analysis, design, coding, testing, revising, etc.) .It should show interrelationships i.e. what needs to be completed before other things can be begin.

References

- This section lists the references that have been cited in the project report. It gives credit to any authors cited.

- References and citation formats such as IEEE

Presentation format

- The project report should be prepared using Word processor formatted to 12 pts Times New Roman and 1.5 spaced.

- 25 mm left and 25mm on the right margins

- Pagination: Preliminary pages numbered i, ii,… and body as 1,2,3…

- Use an automated Table of Contents

THE END!