

ENG 224

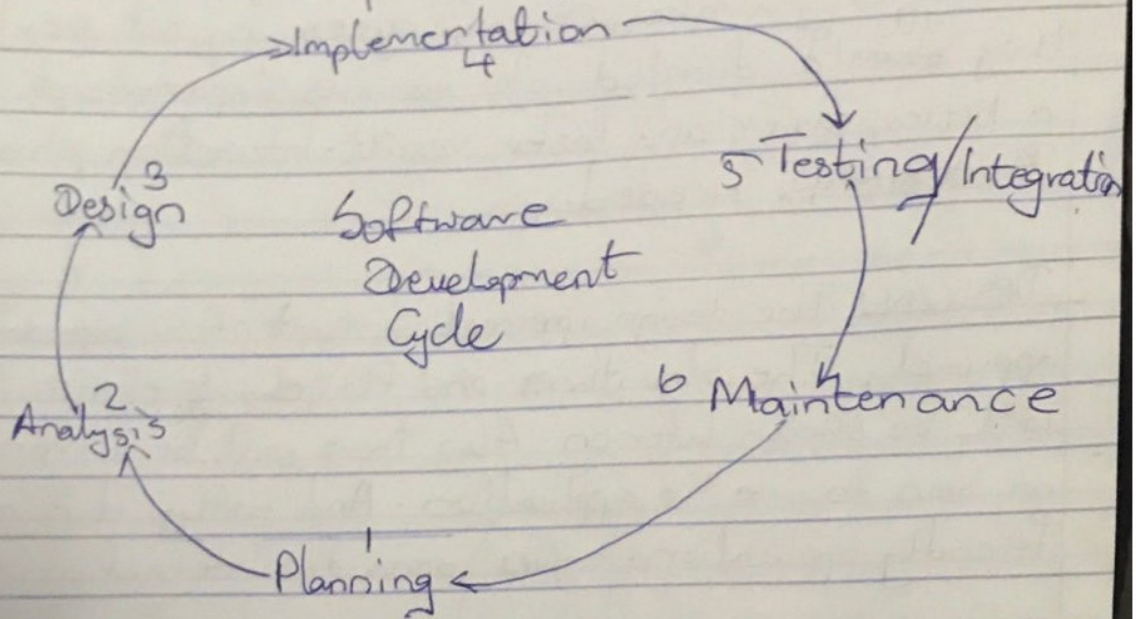
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MATRIC: 18/ENG06/007

DEPT: Mechanical Engineering

Assignment:

1) Software Development Cycle (SDC)



In order to accomplish this process, we will use a database/web-based application. This is made possible with the help of python programming language which is good for AI and also web development with the help of a framework called Django. This will help me design the web-based app and ensure that my/the codes are functioning well. The app name is VIRUS DETECTOR APP. This app will help massively by detecting the virus (COVID-19), displaying, rating, and storing and transmit data gotten from the virus/obtained wirelessly and access the data via the web. It also provides a room

for interaction. The program is ^{also} set to solve the need of tracking employee information and improving employer-employee interaction. This is part of **PLANNING**

ANALYSIS: This app ^{can} will detect the virus, display the result, rate the result, store the data, transmit the data obtained wirelessly and access the data via the web. Also the number of employees is not certain and they ^{will be} should be divided into various departments to obtain a better, easier and faster result. Interaction phase is also **DESIGN**: needed.

DESIGN: The design approach is that of a top-down approach. The algorithm and flowchart of this design will be shown later on. Also there will be a manual installed on how to use the application. And lastly, it is a user friendly application. It gives room for interaction.

Implementation: This stage involves the use of interpreters, debuggers and compilers to generate the code. Compilers can either be single, double or multipass compilers. At the end of this stage, the software is put into production.

Testing/Integration: This is self explanatory. This stage involves asking important questions such as:

- Is it reliable?
- Are there any remaining bugs? etc.

The development team should also examine any aspect of the completed product that did not meet the expectations.

This enables the team to correct errors and inconsistencies for the next project. This makes sure if the system correctly detects the virus (Covid-19)

Maintenance: After testing, the it is time for the product to be released into the marketplace. The ultimate goal of this phase is to ensure that the product remains relevant and high quality. It involves ongoing evaluations of the system's performance. This is to ensure if the product is good for the public.

And lastly, the system/application is a user friendly to encourage interactions, which leads to getting feedbacks. And this will determine if there is need for improvement or not.

2.) Hardware Features/Software Features

Compiler: Converts This converts instructions into a machine-code or lower-level form so that they can be read and executed by a the computer

Interpreter: Is used to execute programming instructions written using one of the many-higher level languages

Debugger: Checks and correct errors in a computer program

Python: This is a type of a programming language

Django: a python-based free and open-source web-framework, which follows the model-template-view architectural pattern.

Web Server: Is a server software, or hardware dedicated to running the software.

Computer: a computer with artificial intelligence is needed

Backup drive and databases are also needed.

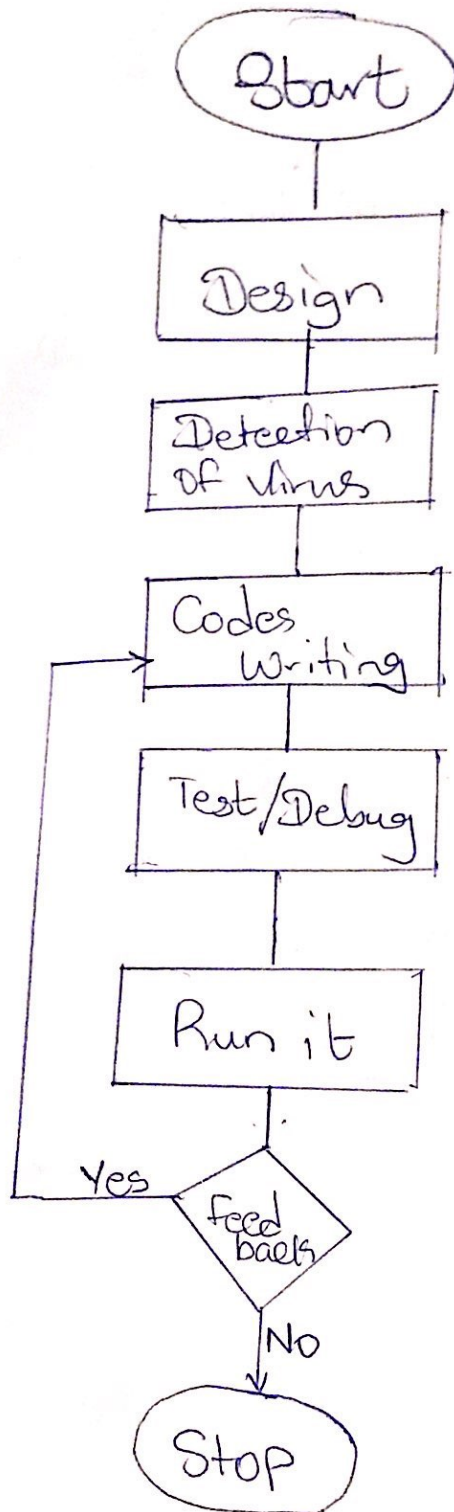
Monitor, USB keyboard and a mouse, micro SD card with a Linux distribution on it will definitely help in the designing

Flowcharts And Algorithms

Algorithm

- Step 1: Start
- Step 2: Design the application with python with the help of Django and also with Artificial Intelligence
- Step 3: Ensure the application can detect the virus with the help of an Artificial Sensor
- Step 4: Ensure all the codes are functioning well and debug it very well to ensure functionality
- Step 5: Test the web based app to ensure it's working very well
- Step 6: Produce the app and put it on the intranet
- Step 7: ~~Stop~~ Feedbacks
- Step 8: Stop ~~Flowchart~~

Flowchart



4) TOP-DOWN APPROACH

