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 MATRIC NO : 18/ENGO2/059
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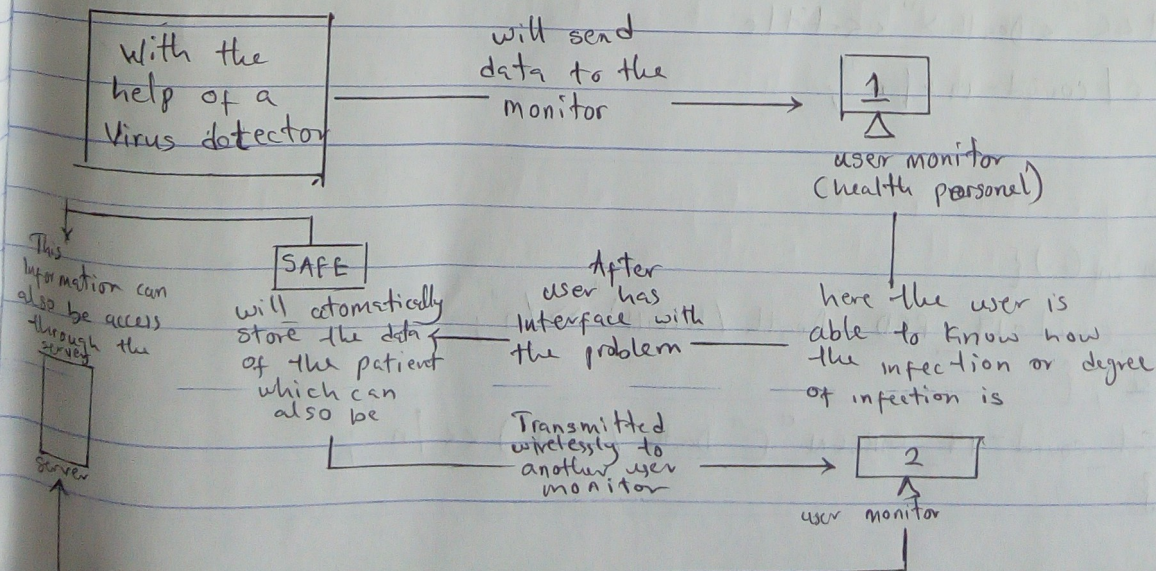
Question 1 : Design the application following the software development cycle.

Answer :

Following the software development cycle, the steps involved in developing the application for the health company is as follows :

1. Requirement : The requirement of this application has already been stated by the company, which are listed as follows
 - a) It should be able to detect and also rate the degree of infection
 - b) It should have a user interface
 - c) It should be able to store and also transmit data obtained wirelessly
 - d) It should be able to access data via the web.

2. Design: In the Design, this is the way the system interface with each other that is the way they communicate with each other.



3. code :

```
#include < covid-19 >
```

```
#include < string >
```

```
#include < stdlib.h >
```

```
void set_content_type (string content_type)
```

```
{  
    cout << "covid-19". <<  
    content_type << "\r\n\r\n";  
}
```

```
void set_page 1 "Total confirmed case" (string)
```

```
{  
    cout << "<Total confirmed case>" << title  
    << "< / covid - 19 > /n";  
}
```

```
void set_page 2 "Discharged" (string)
```

```
{  
    cout << "< Discharged >" << title  
    << "< / covid - 19 > /n";  
}
```

```
void set_page 3 "Death" (string)
```

```
{  
    cout << "< Death >" << title  
    << "< / covid - 19 > /n";  
}
```

```
int main ( ) {
```

```
    set_covid-19_RED ("Death / HIGH") >> /n";  
    else ; {
```

```
        set_covid-19_GREEN ("Death / LOW") << /n";  
    }
```



```
// Output HTML covid-19
```

```
cont << "<!New case
```

```
HTML \>\n";
```

```
cont << "total case confirmed >\n";
```

```
set_page_covid-19 ("Discharge");
```

```
cont << /<-total confirmed case \n;
```

```
cont << "< |Repeat >\n";
```

```
else << "< |Repeat >\n";
```

```
{
```

```
set_page 1 ("Total case confirmed");
```

```
cont << "< |Death >\n";
```

```
cont << "< |Discharge \n";
```

```
cont << "< |HTML (>";
```

```
}
```

```
return 0; {
```

```
}
```

Question 2 : Critically discuss the hardware and software features.

1. The Hardware features

- Virus detecting scanner
- Monitor
- Server.

a) The virus detecting scanner : This is a hardware device that can detect the virus, show the rate at which it is present in the patient.

b) Monitor : After the virus detecting scanner has detect the

Problem, then it will send the data to the monitor screen so that the personnel will be able to interface with the problem.

c) Server: This will help manage network resources. That is it set up the control access to a network, send or receive e-mail, manage print jobs, or host the company's website.

2. Software features.

- Maintainability
- Reusability
- Reliability
- Efficiency

a) Maintainability: The software is flexible enough to accommodate future change that will be needed as new requirements comes in.

b) Reusability: In this case the software can be reused in other clinical matters. That is it can also be reprogrammed to access other needs.

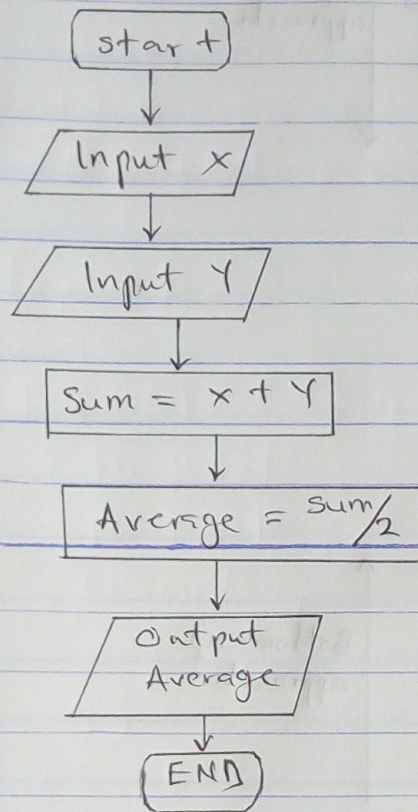
c) Reliability: The false rate at which this software application can be a unacceptable effect or behaviours occurring under permissible operating conditions.

d) Efficiency: This is the degree at which the software fulfill it's purpose without waste of resources.

Question 3 : Support your answer with a flowchart and algorithm

Answer

i) Flowchart



ii) Algorithm

Input : two numbers x and y

Output : the average of x and y

Steps

- Input x

- Input y

- Sum = $x + y$

- average = $\frac{\text{Sum}}{2}$

- Output average

Question 4. Draw the top-down or Bottom-up design approach of the application.

Answer :

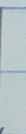
functions well defined for variables



Program objective (Covid-19)

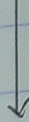


Strategic approach based on Data



Management and implementation of software application

Top-down approach



Bottom-up approach

