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Mechatronics

(2)

Hardware features: Hardware information, Harddisk  
Router

Software features: Webserver, Application server,  
Database

(1) Software development cycle Stage 1 - Planning

This application is going to be called the Covid-19  
tester. It is going to be used to test, conduct and  
give feedback on covid-19 status of any of the users  
on the web.

Stage 2: Defining

After the planning and description of the application, the  
ideas and requirements are then going to be defined. It  
will be done on paper then the document will be sent  
to the ~~client~~ company board

Stage 3: Designing

This involves the algorithm and ~~the~~ schematics of how  
the application is going to be built. The design stage  
is shown below

Stage 4: ~~The~~ app building or Developing

This app is going to be built using C# programming lang-  
uage based on its nature

Stage 5: ~~Various~~ Testing the Product

Various staffs and other personnel of this institution  
will help with their expert knowledge and test the application

Stage 6: ~~Final~~ Deployment in Market and maintenance

The application will be available ~~for~~ ~~on~~ ~~the~~ ~~net~~ but  
~~not~~ ~~at~~ ~~all~~ ~~the~~ ~~net~~ but  
browsers like Opera, UC Browser will not be able to access the  
app. Browser like Chrome, Firefox are acceptable.

The maintenance stage will include using the feedback gotten from  
our users.

(3)

### Algorithm

- Step 1  $\rightarrow$  Start
- Step 2  $\rightarrow$  let case 1 = 0
- Step 3  $\rightarrow$  let case 2 = 0
- Step 4  $\rightarrow$  let positive = 0
- Step 5  $\rightarrow$  let negative = 0
- Step 6  $\rightarrow$  let temperature = 0
- Step 7  $\rightarrow$  let symptom = 0
- Step 8  $\rightarrow$  Check body temperature
- Step 9  $\rightarrow$  If temperature  $\leq 37$ , ~~add~~ let case 2 = 1
- Step 10  $\rightarrow$  If temperature  $> 37$ , let case 1 = 1
- Step 11  $\rightarrow$  ~~Input~~ Display the symptom data
- Step 12  $\rightarrow$  If symptoms  $< 1$ , let Negative = 1
- Step 13  $\rightarrow$  Conduct Covid-19 test
- Step 14  $\rightarrow$  If ~~the~~ test result is positive, display Covid-19 status as Positive
- Step 15  $\rightarrow$  If not display covid-19 status as negative.
- Step 16  $\rightarrow$  Calculate Percentage =  $(\text{Positive Total} / \text{Community} * 100)$
- Step 17  $\rightarrow$  Store all data in the covid-19 test database
- Step 18  $\rightarrow$  End.

Flowchart

Start

Case 1 = 0

Case 2 = 0

Paixya = 0

Negative = 0

Temperature = 0

Symptoms = 0

Check body temp

If temp  $\leq 39$

Check symptoms

If symptoms > 1

Consult Covid-19 test

If result is positive

Calculate Percentage

Display positive status

Store status in platform

End

Step 1  
Step 2  
Step 3  
Step 4  
Step 5  
Step 6  
Step 7  
Step 8  
Step 9  
Step 10  
Step 11  
Step 12  
Step 13

Negative

~~Negative~~

True

False

True

False

True

False

True

False

(4) Top-down Approach

