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SOLUTION TO THE CLASSWORK GIVEN BELOW

Below is the software development life cycle of the web application.

We start with the First phase; ANALYSIS PHASE:

In this phase, I look at the requirements of the multi-national health company I am working with. They are:-

 A web-based application that is able to detect symptoms and display the presence of COVID-19 virus.

 To enable it to show the degree of infection in a geographical area.

 A database for the transfer and storage of data obtained.

 An Admin to access the data stored inside the database.

The next step is the design phase where you begin to design the program you get your team organized .thus usually takes up to a month

DESIGN PHASE:

In this section, we build a conceptual model of the web application. It is in this model that we exploit as much abstraction as appropriate. During this phase, we make use of algorithms, flow charts, in order to make a model design of the application.

ALGORITHM

STEP 1: START

STEP 2: LET CASE 1 = 0

STEP 3: LET CASE 2 = 0

STEP 4: LET POSITIVE = 0

STEP 5: LET NEGATIVE = 0

STEP 6: LET TEMPERATURE = 0

STEP 7: LET SYMPTOM = 0

STEP 8: READ TEMPERATURE

STEP 9: IF THE TEMPERATURE>37, ADD 1 TO CASE 2

STEP 10: NOT VALID? THEN ADD 1 TO CASE 1

STEP 11: INPUT SYMPTOM DATA

STEP 12: IF SYMPTOMS>1, ADD 1 TO NEGATIVE

STEP 13: NOT VALID? CONDUCT COVID-19 TEST

STEP 14: IF TEST RESULT IS POSITIVE, DISPLAY COVID-19 STATUS

STEP 15: NOT VALID? DISPLAY COVID-19 STATUS

STEP 16: CALCULATE PERCENTAGE= (POSITIVE TOTAL/COMMUNITY) \*100 STEP 17: STORE ALL DATA INTO DATABASE

STEP 18: END

FLOWCHART

START

CASE 1= 0

CASE 2= 0 POSITIVE= 0

NEGATIVE= 0

TEMPERATURE= 0

SYMPTOMS= 0

READ TEMPERATURE

IS NO TEMPERATURE>37

YES

ADD 1 TO CASE 1

INPUT SYMPTOMS

ADD 1 TO CASE 2

SYMPTOMS>1?

NEGATIVE

YES

CONDUCT TEST

TEST POSITIVE?

YES

POSITIVE

NO

NO

NEGATIVE

DISPLAY COVID-19 STATUS

PERCENTAGE = (POSITIVE TOTAL/COMMUNITY)\*100

STORE ALL DATA IN DATABASE

END

BOTTOM-UP APPROACH

CASE 1

CASE 2

POSITIVE

NEGATIVE

TEMPERA TURE

SYMPTOM CHECKS

DISPLAY STATUS

STORE IN DATABAS E

TOP-DOWN APPROACH

STORE IN DATABASE

STORE IN DATABASE

STORE IN DATABASE

STORE IN DATABASE

STORE IN DATABASE

STORE IN DATABASE

STORE IN DATABASE

STORE IN DATABASE

So after all these processes, An Admin will be created in order to manage the data stored in the data base.

DEVELOPMENT PHASE:

This is the phase in which we discuss about the making of the above model into software used by hardware. The application critically requires that it is to be accessed on all platforms. Meanwhile, the software is going to be user-friendly (to be used without difficulties) for the staff in the hospital.

The usage of web development languages are also to be used in making the web application and the database itself.

TESTING PHASE:

After the application is made, we perform trial and error operations in order to perform debugging.

When the application is ready we now finalize with its deployment. Debugging the application always takes time so it’s usually advisable to review the code very well.

DEPLOYMENT phase:In this phase we launch our application on to the internet where it can be used freely by the staff . This usually the final stage of the program design after it can be used by the staff.