G.H.RAISONI COLLEGE OF ENGINEERING & MANAGEMENT, WAGHOLI
PUNE
(An Autonomous Institute Affiliated to SPPU)

Department of Information Technology

SEM-III 2020-21

PPL-I Project

<u>TOPIC: LAPTOP CONFIGURATION SYSTEM</u>

Developed By:

1. Chris Louis Lopes (SITA06)
2. Varun Satishkumar Mohata (SITA55)
3. Vipul Pradeep Chaudhary (SITA57)
4. Rutwek Ramraoji Hirwe (SITA61)
5. Piyush Dnyanadeo Sonawane (SITA62)

Under the Supervision of

<u>Prof. Priya Ujawe</u>

GHRCEM, Wagholi, Pune

Experiment No 01

Aim: - Apply following problem solving steps for given problem statement (Write-Up):

i. Identify the problem

ii. Understand the problem

iii. Find the alternative solutions

iv. Select the best solution

v. List the instructions

vi. Evaluate the solution

Objectives:-

1) To learn and understand problem solving technique.

2) To apply the problem solving steps to solve the real life problem

Theory:-

Problem solving is a creative process which defines categorization and automation. There   are a number of steps that can be taken to raise the level of one's performance in problem solving.

The problem solving steps are as follows:

1. Identify the problem

2. Understand the problem

3. Find the alternative solutions

4. Select the best solution

5. List the instructions

6. Evaluate the solution

1. Identify the problem: - It is the important step in problem solving. Ex: to write the program

For Fibonacci series, here to identify the problem statement clearly.

2. Understand the problem: Understand what is involved in the problem before continue the

Solution.

3. Find the alternative way to solve the problem: This list should be as completes possible.

You might want to talk to other people to find other solution. Alternative solutions must be

Acceptable ones.

4. Select the best solution: In these steps, to identify and evaluate the pros and cons of each

Possible solution before selecting the best one. Then select best criteria for the solution.

5. List the instructions: Step-by-step instructions must be following within the knowledge base

Setup in step 2.

6. Evaluate the solution: Evaluation of the solutions means test a solution to check its result to

See if it is correct, and to see if it satisfies the needs of the person with the problem.

A. Apply the problem solving steps for to solve the following problem:

What to do this evening?

1. Identify the problem: How do the individuals wish to spend the evening?

2. Understand the problem: The only solutions that should be selected are ones that

Everyone involved would know how to do.

3. Identify alternatives:

a. Watch television

b. Play video games

c. Help to mother

d. Meet to friends

The list is complete only when you can think of no more alternatives.

4. Select the best way to solve the problem: Find out alternatives that are not

Acceptable.

5. Prepare a list of steps: That will result in a fun evening.

6. Evaluate the solution: Event evaluated successfully.

B. Apply the problem solving steps for to solve the following problem:

Project Statement: Laptop Customization System

1. Identify the problem: To create the project for Laptop Customization System.

2. Understand the problem:

a. To Implement the Laptop Customization System Using the C++ Concepts.

b. To Take the input from user to for the given Features (e.g. Operating System ,Processor ,RAM, Memory Type , Graphics Card , Price of Laptop)

c. In this User will get the Options for selecting the Features.

3. Identify alternatives:

1. Using class, object, member functions

2. Using inheritance

3. Using inheritance, constructors

4. Using inheritance, constructors, formatted IO operations

5. Using inheritance, constructors, formatted IO operations and file handling

4. Select the best way to solve the problem: Using inheritance, constructors, formatted IO

Operations and file handling.

5. Prepare a list of steps:

a. Start

b. Take the input from user

c. Store the data

d. Perform the operations on data

e. Display the Details that the end user selected and Show the suggestions for Laptops related to his Specifications/Features selected.

6. Evaluate the solution: Display all the selected details of laptop using the OOP concepts with the help of C++ programming. Event evaluated successfully.

Conclusion: Thus we studied and applied the problem solving steps on Laptop Customization System.