FACULTY OF COMPUTER SCIENCE AND ENGINEERING
Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Topi

Lab Duration: 3 hrs. **CS112 Object Oriented Programming Lab** **Marks: 10**

Lab No: 05 **Instructor: Mr. Usman Haider** **Dated:14/03/2022**

Before performing tasks, keep in mind following rules:

1. **CHEATING IS NOT ALLOWED. Looking at someone else's screen is also cheating.**
2. **Mobile phone and internet usage are not allowed.**
3. **If you have any queries related to a task, you can ask instructors only. Never talk to each other until you are allowed.**
4. **Do not answer any query until you are asked.**
5. **Perform all the tasks.**
6. **Avoiding any of the above rules will lead to marks deduction.**

TASK 1:

Create a class, Heater that contains a single integer field, temperature. Define a constructor that takes no parameters. The temperature field should be set to the value 15 in the constructor. Define the mutators warmer and cooler, whose effect is to increase or decrease the value of the temperature by 5 respectively. Define an accessor method to return the value of temperature.

In the main function, you must create a menu, seeking input from the user for temperature adjustment.

Sample Output:

Temperature = 15 *// printed after creating object*
Temperature = 20 *// printed after calling warmer*
Temperature = 25 *// printed after calling warmer*
Temperature = 20 *// printed after calling cooler*

TASK 2:

Write a parity class. This class allows the program to put any number of items into it and returns TRUE if an even number of items is put in and FALSE if an odd number is used**.**

Member functions:

void parity::put(int num); *// Put another element*

void parity::print(void); *// Prints all elements that have been Put till now*

void parity::delete(int num); *// Delete only last elements that had been added using Put function*

int parity::test(void); *// Return TRUE(1) if an even number of puts have been done. Return FALSE(O) for an odd number.*

Note: Include the default and constructor with parameters to initialize the member variable.

TASK 3:

Design a class **stringType** with two member variables first and second of type string and following member functions:

Member functions:

void setValues(string str1, string str2)

void printValues()

int maxLength()

int compare(string s1, string s2)

void copy(string source, string destination)

string concatenate(string s1, string s2)

int searchWord(string word)

int searchChar(char ch)

Note: Don't use any library function, implement your logic! Also, include the default and constructor with parameters to initialize the member variable.