Lab 15 (Exception)
OOP – BCS

Task 1: Create forward declaration of Job class by writing "**class Job;**". Next, create a **JobException** class with data members Job* (to store a Job object) and char* (for error message). Create two member functions:

- a show function to show message
- getter to return Job object

At start, we have given the forward declaration of the Job class to use it in the JobException class. Now, create a Job class having data member Job ID (Job number) and the cost of the Job. Write stream insertion and extraction operators. When the user enters Job data, if the Job fee is below 250, then create a JobException object and throw it.

Write a main function that declares an array of 5 Job objects. If a JobException object is thrown during the data entry for any Job, require the user to enter data again in the job.

Hint: Use try/catch inside loop and in case of catch decrement loop variable to repeat input for same index

Task 2: Create an OutOfRangeException that inherits from the built-in **`out_of_range`** exception class**.** For built-in class include header file **"stdexcept"** i.e. **`#include <stdexcept>`**. Include fields that hold the low and high limits of the range and the value that was out of range. Create a 3 parameters constructor. Include get functions for each of the values.

Create a Meal class. Data fields include a string meal name and a double price. Include a data entry function that prompts for and accepts values for both data fields, and that throws an OutOfRangeException if the price is less than 5 or more than 29.99. Write setPrice function to set price, also write show function to show both data members.

Write a main function. Create an array of size 5 for class Meal. Write a loop to take input, write function inside try block, catch OutOfRangeException and show values by calling 3 getters, also set price to 18. At the end show the value of all meals.

*********** END OF LAB (Best of Luck) **********