ASSIGNMENT NO:5

Problem statement

Create user defined exception to check the following condition and throw the exception if the criteria does not meet.

1. Users stays in Pune/Mumbai/Bangalore/Chennai
2. User has 4-wheeler

City , vehicle from the user and check for the conditions mentioned above. If any of the condition not met then throw the exception. If user does not enter proper input throw the exception.

Aim of Assignment :

C++ program to implement and understand the concept of exception handling. To understand the concept like throw , catch , try , etc. of the exception handling. Using this, check the conditions given in above problem.

Description:

The one advantage of C++ over C is the Exception handling . This program explains how EXCEPTION are handled in C++. The code that is likely to throw exceptions is enclosed in the “try” block. The try block can also contain a “throw” statement that is used to explicitly throw exceptions. The “throw” statement consists of a keyword “throw” followed by a parameter which is the exception name. This parameter is then passed to the catch block. The exception thrown in the “try” block is passed on to the “catch” block. The catch block contains the code to process the thrown exception. It can contain merely a message or an entire code block to process the exception such that the normal flow of the program is not hindered.

It is not necessary that each try block should be followed by only one catch block. If our try block code contains the statements that can throw more than one exceptions, then we can have multiple catch blocks wherein each catch block provides processing for each of the exceptions.

OOP Concept Used:

1. Exception handling
2. Menu driven program
3. Use of while loop

SOURCE CODE:

#include<iostream>

#include<string.h>

using namespace std;

int main()

{

p:int i=0;

char ch;

string a;

try

{

cout<<"Enter city name (Enter name in capitals) : ";

cin>>a;

if(a=="PUNE"||a=="MUMBAI"||a=="BANGALORE"||a=="CHENNAI"||a=="pune"||a=="angalore"||a=="chennai"||a=="mumbai")

{

cout<<"\nDo you have 4-wheeler?\n~press Y if yes\n~press N if no\n";

cin>>ch;

if(ch=='n'||ch=='N')

{

i=1;

throw i;

}

cout<<"\nCONGRATULATIONS! There is parking available for you.";

}

else

{

throw i;

}

}

catch(int x)

{

if(x==0)

cout<<"\nERROR! Parking is not available in this city. Enter correct city.";

if(x==1)

cout<<"\n SORRY.currently parking is available only for 4-wheelers.";

char ch1;

cout<<"\nDo you want to continue? (~press Y/N) : ";

cin>>ch1;

cout<<"\n\n";

if(ch1=='y'||ch1=='Y')

goto p;

}

return 0;

}

Conclusion –

So in this program we learn the concept of Exception handling and its working . Also get to know when and how to use it .