OBJECT ORIENTED PROGRAMMING

LAB 12

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//1.WAP to throw and handle ‘division by zero’ exception.

#include<iostream>

using namespace std;

int main()

{ int num\_025 ,deno\_025;

cout<<"enter num\_025 and deno\_025";

cin>>num\_025>>deno\_025;

try

{

    if(deno\_025==0)

    {

        throw 0;

    }

}

catch(int)

{

    cout<<"denomerator cant be zero\n";

}

cout<<"prog ends";

    return 0;

}

OUTPUT-1



//2.WAP to throw and handle’ array out of bound’ exception.

#include<iostream>

using namespace std;

int main()

{ int arr\_025[5],n;

cout<<"enter  5 elements in array " ;

for (int i = 0; i < 5; i++)

{

    cin>>arr\_025[i];

}

cout<<"enter the inex no. u want to access";

cin>>n;

try

{

    if(n>4||n<0)

    {

        throw 0;

    }

}

catch(int)

{

    cout<<"\nwrong index\n";

}

cout<<"prog ends";

    return 0;

}

OUTPUT-2



//3.WAP to demonstrate multiple catch .

#include <iostream>

using namespace std;

int main()

{

    int num\_025;

    cout<< "\n Enter a positive number : ";

    cin >> num\_025;

    try

    {

        if (num\_025 == 0)

            throw(char \*)"Zero"; // Exception 1

        else if (num\_025 == -1)

            throw num\_025; // Exception 2

        else if (num\_025 == 1)

            cout <<"\n NUMBER = " << num\_025;

        else

            throw(float) num\_025;

    }

    catch (int num\_025)

    {

        cout <<" \n" << num\_025 << " is negative";

    }

    catch (char \*msg)

    {

        cout <<"\n The number is " << msg;

    }

    cout << " Exiting main()";

    return 0;

}

OUTPUT-3



//4.WAP to demonstrate multiple catch and catch all.

#include <iostream>

using namespace std;

int main()

{

    int num\_025;

    cout<< "\n Enter a positive number : ";

    cin >> num\_025;

    try

    {

        if (num\_025 == 0)

            throw(char \*)"Zero"; // Exception 1

        else if (num\_025 == -1)

            throw num\_025; // Exception 2

        else if (num\_025 == 1)

            cout <<"\n NUMBER = " << num\_025;

        else

            throw(float) num\_025;

    }

    catch (int num\_025)

    {

        cout <<" \n" << num\_025 << " is negative";

    }

    catch (char \*msg)

    {

        cout <<"\n The number is " << msg;

    }

    catch (...) // caught exception 3

    {

        cout << "\n catch all code executed ";

    }

    cout << " Exiting main()";

    return 0;

}

OUTPUT-4



//5.WAP that dynamically allocates memory for n no.objects for

//student class ,throw exception if memory is not allocated.

#include<iostream>

#include<stdlib.h>

using namespace std;

int main()

{ int \*a\_025,n;

a\_025=new int[5];

try

{

    if(a\_025==NULL)

    {

        throw 0;

    }

    else

    cout<<"memory allocated\n";

}

catch(int)

{

    cout<<"\nmemory not allocated\n";

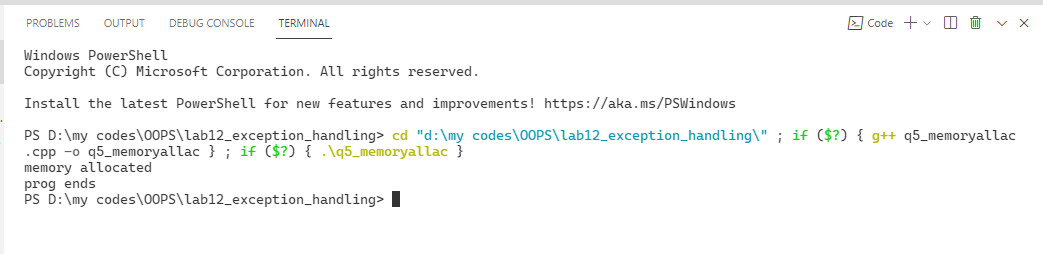
}

cout<<"prog ends";

    return 0;

}

OUTPUT-5



//6)WAP that calculates the square root of a number. Throw an exception if a negative

number is taken

#include <iostream>

#include <math.h>

using namespace std;

int main()

{

    int num\_025;

    cout << "enter the number to fing sqr root";

    cin >> num\_025;

    try

    {

        if (num\_025 >= 0)

        {

            cout << "sqroot of the number is ";

            float sqroot;

            sqroot = pow((float)num\_025, 1.0 / 2.0);

            cout<<sqroot;

        }

        else

            {

                throw num\_025;

            }

    }

    catch (int)

    {

        cout << "number cannot be negetive\n";

    }

    cout << "\nprog ends";

    return 0;

}

OUTPUT-6



//7) WAP to check the expiry date of a medicine. If the expiry date&lt;current date, then

//throw an exception.

#include <iostream>

#include <math.h>

using namespace std;

struct datee

{

    int month\_025,day\_025,year\_025;

}e,c;

int main()

{

    int num;

    cout << "enter the expiry date and current date in dd/mm/yy format\n";

    cin>>e.day\_025>>e.month\_025>>e.year\_025;

    cin>>c.day\_025>>c.month\_025>>c.year\_025;

    try

    {

        if (c.year\_025>e.year\_025)

        {

          throw 0;

        }

        else if(c.year\_025==e.year\_025&&c.month\_025>e.month\_025)

            {

                throw 0;

            }

            else if(c.year\_025==e.year\_025&&c.month\_025==e.month\_025&&c.day\_025>e.day\_025)

            {

                throw 0;

            }

            else

            {

                 cout << "your medicine is not expired yet \n";

            }

    }

    catch (int)

    {

        cout << "the medicine is expired\n";

    }

    return 0;

}

OUTPUT-7



/\*8) WAP to take email address as input raise an exception if the email address violates

any one of the following conditions

I. It should have &#39;@&#39; symbol in the email address

Ii.The string must be terminated with .com\*/

#include <iostream>

//#include<stdio.h>

using namespace std;

int main()

{

    char a\_025[50];

    int i, c = 0, com = 0;

    cout << "enter your email address ";

    gets(a\_025);

    for (i = 0; a\_025[i] != '\0'; i++)

    {

        if (a\_025[i] == '@')

        {

            c++;

        }

    }

    if (a\_025[i - 1] == 'm' && a\_025[i - 2] == 'o' && a\_025[i - 3] == 'c' && a\_025[i - 4] == '.')

    {

        com++;

    }

    try

    {

        if (c == 0)

        {

            throw 1.1;

        }

         if (com == 0)

        {

            throw 1;

        }

        if(com==1&&c==1)

        {

            cout<<"\nvalid email\n";

        }

    }

    catch (double)

    {

        cout << "\nthere is no @ in email address \n";

    }

    catch (int)

    {

        cout << "\nthere is no .com in email address \n";

    }

    return 0;

}

OUTPUT-8

