

Quiz 4.1: Error and Exceptions Handling

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11/02/22

CPE11S5

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quiz 4.1 (Global Scope)
1  #include <iostream>
2  #include <string>
3  #include <iomanip>
4  #include <stdlib.h>
5  using namespace std;
6  double invalid(int t, int m)
7  {
8      if (m < t)
9          throw (string)"Insufficient amount!\n";
10     double amount = m - t;
11     return (amount);
12 }
13 double inputs(int IN)
14 {
15     if (cin.fail())
16         throw IN;
17 }
18 int main()
19 {
20     int n1, n2, n3, n4, n5,
21         change, M, total;
22     double invalidinput, insufficient;
23     bool flag = false;
24     do
25     {
26         try
27         {
28             cout << "Item Description\tPrice\n\n";
```

```

bool flag = false;
do
{
    try
    {
        cout << "Item Description\tPrice\n\n";
        cout << "Item 1: \t\t";
        cin >> n1;
        cout << "Item 2: \t\t";
        cin >> n2;
        cout << "Item 3: \t\t";
        cin >> n3;
        cout << "Item 4: \t\t";
        cin >> n4;
        cout << "Item 5: \t\t";
        cin >> n5;
        total = (n1 + n2 + n3 + n4 + n5);
        cout << "Total: \t\t\t" << total << "\n";
        cout << "-----\n";
        cout << "Amount tendered: \t";
        cin >> M;
        invalidinput = invalid(M,total);
        insufficient = inputs(M);
        change = (M - total);
        cout << "Change: \t\t" << change << "\n";
        flag = true;
    }
    catch (string& z)
    {

```

```

        cout << "-----\n";
        cout << "Amount tendered: \t";
        cin >> M;
        invalidinput = invalid(M, total);
        insufficient = inputs(M);
        change = (M - total);
        cout << "Change: \t\t" << change << "\n";
        flag = true;
    }
    catch (string& z)
    {
        cerr << z << endl;
        system("pause");
        system("cls");
    }
    catch (...)
    {
        cerr << "Please put an integer only! \n";
        cin.clear();
        system("pause");
        system("cls");
    }
} while (!flag);
return 0;
}

```

```

Item Description      Price
Item 1:              10
Item 2:              50
Item 3:              23
Item 4:              65
Item 5:              88
Total:              236

Amount tendered:      HAN
Please put an integer only!
Press any key to continue . . . █

```

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Item Description      Price
Item 1:              10
Item 2:              10
Item 3:              10
Item 4:              10
Item 5:              50
Total:              90

Amount tendered:      100
Insufficient amount!

Press any key to continue . . .

```

Conclusions:

I've applied the lessons about the error and exception handling that our professor taught us last week. I've noticed that since it is error and exception handling activity, I used the try-catch and do-while statement. The only problem that I've encountered so far is how do I make a huge space and have my program aligned. Then, I remembered that the "\t" exist and I can use it instead of inputting many spaces. Additionally, I've learned system pause and clear. This means that in you include this in your program, it will pause and clear your program. However, to be able to use it, you need to include "stdlib.h". As you can see in my output, there's a message "press any key to continue..." that means that I press any key, it will start from the start and return to 0 because my output is false. It will continue until my output is finally true, then after that it will execute my program.

I affirm that I will not give or receive any unauthorized help in this activity/exam and that all work will be my own.