

**Write a C++ program to accept an email address and throw an exception if it does not contain @ symbol.**

## Output:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\Acer\OneDrive\OOP LAB\Sixth Lab> g++ accept_email_and_chk_@.cpp ; ./a.exe
Enter Email Id : bimal@gmail.com
Email Id is Valid.
Enter Email Id : bimalgmail.com
Exception Caught....
Invalid Email Id!!!
Enter Email Id : bimal@gmailcom
Exception Caught....
Invalid Email Id!!!
```

**Write a C++ program to accept user name and password and throw an exception if the password has less than 6 characters or does not contain a digit.**

## Output:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\Acer\OneDrive\OOP LAB\Sixth Lab> g++ accept_username_and_pass_and_chk.cpp ; ./a.exe
Enter User Name: Bimal
Enter Password: abcd10
Password is Correct.
Enter User Name: Bimal
Enter Password: abc
Password must be at least 6 Characters Long...
Invalid password Format!!!
Enter User Name: Bimal
Enter Password: abcdef
Password must have at least One Digit (0-9)
Invalid password Format!!!
```

**Write a C++ program to perform arithmetic operations on two numbers and throw an exception if the dividend is zero or does not contain an operator.**

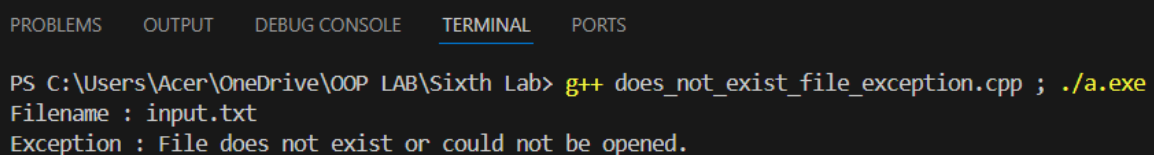
## Output:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\Acer\OneDrive\OOP LAB\Sixth Lab> g++ arithmetic_of_two_num.cpp ; ./a.exe
Enter the first number: 13
Enter the second number: 0
Enter an operator : /
Exception : Division by zero is not allowed.
Enter an operator : g
Exception : Invalid operator.
```

**Create a program that attempts to open a file named "input.txt" for reading. Use exception handling to catch and handle the case when the file does not exist.**

### **Output:**



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
PS C:\Users\Acer\OneDrive\OOP LAB\Sixth Lab> g++ does_not_exist_file_exception.cpp ; ./a.exe
Filename : input.txt
Exception : File does not exist or could not be opened.
```

**Write a C++ program to demonstrate try, throw and catch statement.**

**Output:**

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Users\Acer\OneDrive\OOP LAB\Sixth Lab> g++ try_throw_catch_example.cpp ; ./a.exe
Enter the first number : 12
Enter the Second number : 0
Exception : Number cannot be divisible by zero!
```



**Write a template function that operates on different types. Use exception handling within the template function to handle exceptions specific to each data type.**

**Output:**

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\Acer\OneDrive\OOP LAB\Sixth Lab> g++ template_function_that_operate_on_diff_type.cpp ; ./a.exe
Division of integer is : 5
Exception : Number cannot be divisible by zero!
Division of float datatype is : 4.2
```

**Write a program that repeatedly prompts the user for numeric input. Use exception handling to ensure that the input is a valid integer, and handle exceptions gracefully if the input is not an integer.**

## Output:

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
PS C:\Users\Acer\OneDrive\OOP LAB\Sixth Lab> g++ repeatedly_prompts_user_num_input.cpp ; ./a.exe
Please enter an integer: abc10
Exception: Invalid input. Please enter a valid integer.
Please enter an integer: 12
You entered: 12
Would you like to enter another number? (y/n): n
Exiting program.
```