```python
Number = int(input(" Please Enter any Number: "))

for i in range(2, Number + 1):
    if(Number % i == 0):
        isprime = 1
        for j in range(2, (i //2 + 1)):
            if(i % j == 0):
                isprime = 0
                break

        if (isprime == 1):
            print(" %d is a Prime Factor of a Given Number %d" %(i, Number))
```

input

```
Please Enter any Number: 100
2 is a Prime Factor of a Given Number 100
5 is a Prime Factor of a Given Number 100
```

```python


start, end = 1, 100

for num in range(start, end + 1):

    # checking condition
    if num % 2 == 0:
        print(num, end = " ")
```

input

```
2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 8
8 90 92 94 96 98 100
```

In [10]:

```python
#Write a python program that accepts the length of three sides of a triangle as inputs.
#The Program should indicate whether or not the triangle is a right angled triangle using funct

try:
    a=int(input("Enter side 1: "))
    b=int(input("Enter side 2: "))
    c=int(input("Enter side 3: "))
    if (a>0,b>0,c>0):
        if (c**2==a**2+b**2):
            print("THE TRIANGLE IS A RIGHT ANGLED TRIANGLE")
        else:
            print("THE TRIANGLE IS NOT A RIGHT ANGLED TRIANGLE")
except TypeError:
    print("Unsupported operation")
except ZeroSideError:
    print("One side is zero, thus the triangle does not exist")
```

```
Enter side 1: 3
Enter side 2: 4
Enter side 3: 5
THE TRIANGLE IS A RIGHT ANGLED TRIANGLE
```

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Python Programming
Assignment 3

10/11/22

Problem Statement:
To check whether or not the triangle is a right-angled triangle using function with exception handling

Aim: Write a python program that accepts the length of 3 sides of a triangle as inputs. The program should indicate whether or not the triangle is a right-angled triangle using function with exception handling.

Objectives: To learn and implement function and exception handling.

Theory:
Python Function: In python a function is a group of related students that performs a specific task. Functions help break our program into smaller and modular chunks. As our program ~~groups~~ grows larger and larger, functions make it more organized and manageable. It avoids repitition and makes the code reusable.

Exception Handling using Python:
In python, exceptions can be handled using a try statement. The critical operations which can raise an exception is placed inside the try clause. The code that handles the exceptions is written in the except clause.

Platform : Windows - Python Editor (Jupyter)

Algorithm :

Step 1 : Start
Step 2 : Declare three sides / variable & initialize
Step 3 : Take 3 inputs for taking sides of a triangle from user.
Step 4 : Give the logic of right-angle triangle
Step 5 : Take if-else Statement and give a condition on it.
Step 6 : Print an approximate message in statements.
Step 7 : stop.

Input : Accepts the length of 3 sides of a triangle as inputs from the user.

Output : Display whether or not a right-angle triangle.

Conclusion :

Studied python function using exception handling.

FAQ's

Ans 1) A function is a group of related statements that performs a specific task. Functions help break our program into smaller and modular chunks. As our program grows larger and larger functions make it more organized and manageable.

Ans 2) A python function will always have a return value so, if you don't explicitly use a return value in a return statement or if you totally omit the return statement, then python will implicitly return a default value.

Ans 3) Statement 3 will not be executed. If an exception is thrown by the 'try' block at any point, the remaining code after the exception will not be executed. Instead, the flow control will directly come to the 'catch' block.

Ans 4) Base exception, Arithmetic error, Buffer error, lookup error, Assertion error, Attribute error, Import error, etc.