

PYTHON – WORKSHEET 1**Internship: Mitchell Khanna | Date: 25th July | MCQ & Subjective | Deadline of Submission: 28th July 2024**

Q1 to Q8 have only one correct answer. Choose the correct option to answer your question.

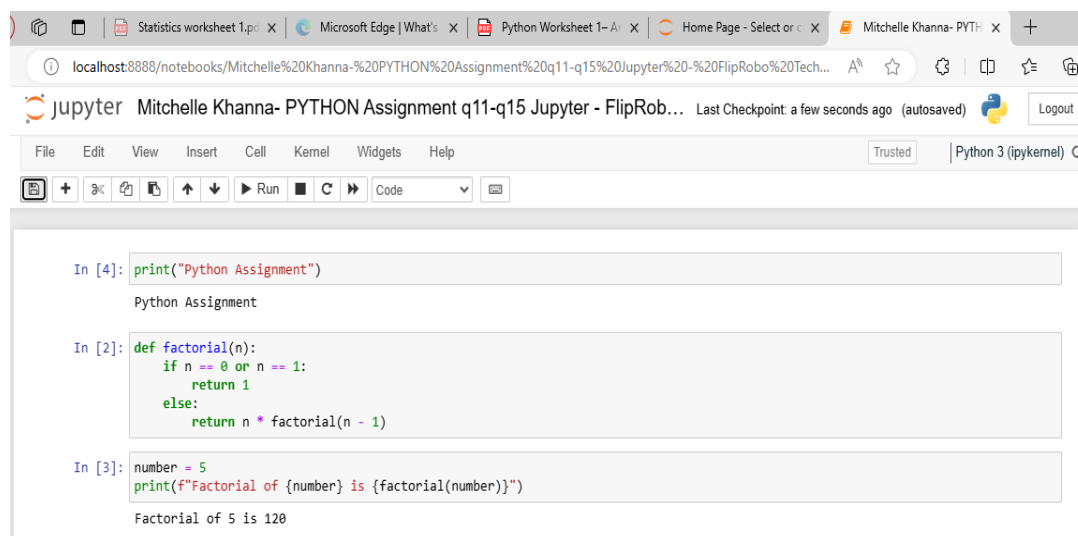
1. Which of the following operators is used to calculate remainder in a division?
A) #
C) %
B) &
D) \$
2. In python 2//3 is equal to?
A) 0.666
B) 0
C) 1
D) 0.67
3. In python, 6<<2 is equal to?
A) 36
C) 24
B) 10
D) 45
4. In python, 6&2 will give which of the following as output?
A) 2
B) True
C) False
D) 0
5. In python, 6|2 will give which of the following as output?
A) 2
B) 4
C) 0
D) 6
6. What does the finally keyword denotes in python?
A) It is used to mark the end of the code
B) It encloses the lines of code which will be executed if any error occurs while executing the lines of code in the try block.
C) the finally block will be executed no matter if the try block raises an error or not.
D) None of the above
7. What does raise keyword is used for in python?
A) **It is used to raise an exception.**
B) It is used to define lambda function
C) it's not a keyword in python.
D) None of the above
8. Which of the following is a common use case of yield keyword in python?
A) in defining an iterator
B) while defining a lambda function
C) in defining a generator
D) in for loop.

Q9 and Q10 have multiple correct answers. Choose all the correct options to answer your question.

9. Which of the following are the valid variable names?
A) **_abc**
B) 1abc
C) **abc2**
D) None of the above
10. Which of the following are the keywords in python?
A) **yield**
B) **raise**
C) look-in
D) all of the above

Q11 to Q15 are programming questions. Answer them in Jupyter Notebook.

11. Write a python program to find the factorial of a number.



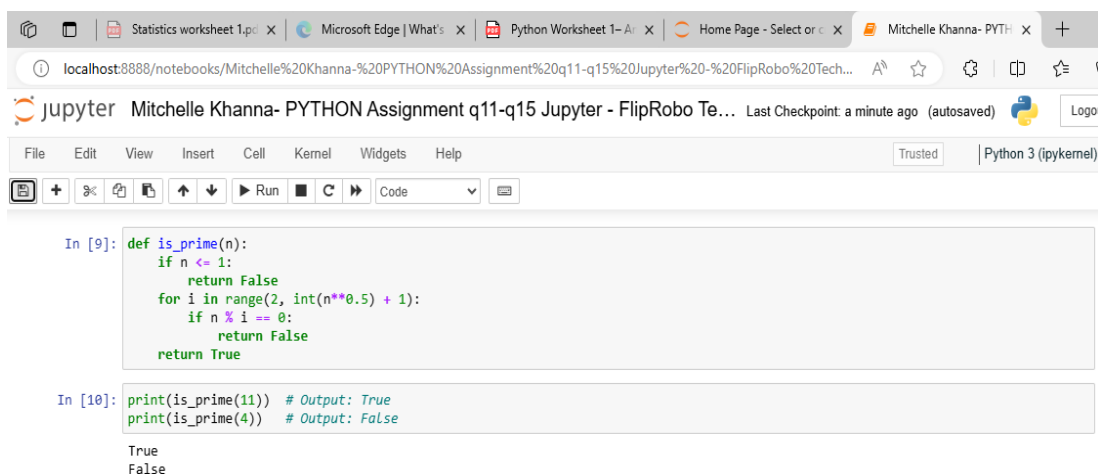
The screenshot shows a Jupyter Notebook with three code cells. The first cell prints "Python Assignment". The second cell defines a recursive function `factorial(n)` that returns 1 for `n == 0` or `n == 1`, and `n * factorial(n - 1)` otherwise. The third cell sets `number = 5` and prints the result of `factorial(number)`, which is 120.

```
In [4]: print("Python Assignment")
Python Assignment

In [2]: def factorial(n):
        if n == 0 or n == 1:
            return 1
        else:
            return n * factorial(n - 1)

In [3]: number = 5
        print(f"Factorial of {number} is {factorial(number)}")
Factorial of 5 is 120
```

12. Write a python program to find whether a number is prime or composite.

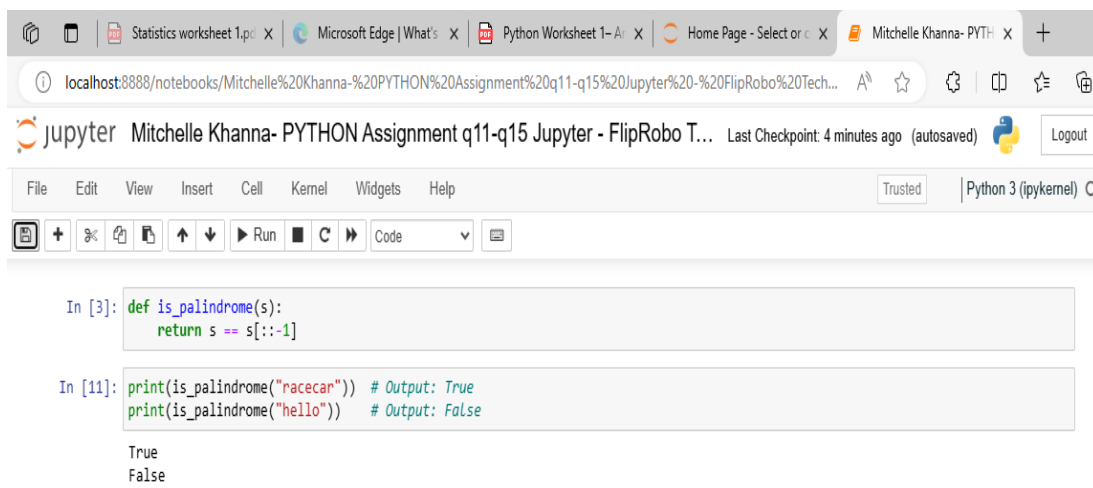


The screenshot shows a Jupyter Notebook with two code cells. The first cell defines a function `is_prime(n)` that returns `False` if `n <= 1`, and iterates from 2 to `int(n**0.5) + 1` to check for divisors. If a divisor is found, it returns `False`; otherwise, it returns `True`. The second cell prints the results of `is_prime(11)` (True) and `is_prime(4)` (False).

```
In [9]: def is_prime(n):
        if n <= 1:
            return False
        for i in range(2, int(n**0.5) + 1):
            if n % i == 0:
                return False
        return True

In [10]: print(is_prime(11)) # Output: True
         print(is_prime(4))  # Output: False
True
False
```

13. Write a python program to check whether a given string is palindrome or not.

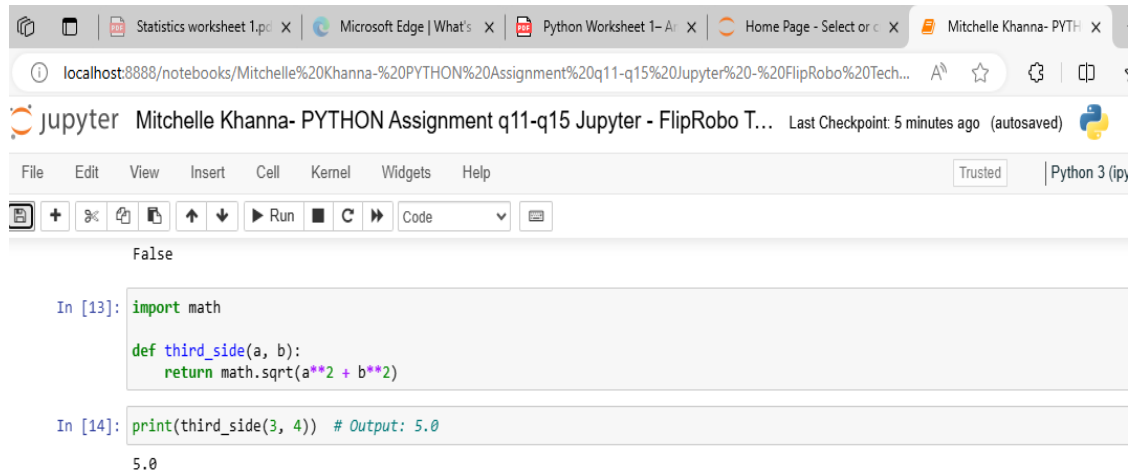


The screenshot shows a Jupyter Notebook with two code cells. The first cell defines a function `is_palindrome(s)` that returns `s == s[::-1]`. The second cell prints the results of `is_palindrome("racecar")` (True) and `is_palindrome("hello")` (False).

```
In [3]: def is_palindrome(s):
        return s == s[::-1]

In [11]: print(is_palindrome("racecar")) # Output: True
         print(is_palindrome("hello"))  # Output: False
True
False
```

14. Write a Python program to get the third side of right-angled triangle from two given sides.



The screenshot shows a Jupyter Notebook in a web browser. The browser tabs include 'Statistics worksheet 1.pdf', 'Microsoft Edge | What's', 'Python Worksheet 1-...', 'Home Page - Select or c...', and 'Mitchelle Khanna- PYTH...'. The address bar shows 'localhost:8888/notebooks/Mitchelle%20Khanna-%20PYTHON%20Assignment%20q11-q15%20Jupyter%20-%20FlipRobo%20Tech...'. The notebook title is 'Mitchelle Khanna- PYTHON Assignment q11-q15 Jupyter - FlipRobo T...'. The menu bar includes 'File', 'Edit', 'View', 'Insert', 'Cell', 'Kernel', 'Widgets', and 'Help'. The toolbar shows icons for file operations, a 'Run' button, and a 'Code' dropdown. The notebook content shows two code cells. The first cell, labeled 'In [13]:', contains the following code:

```
import math

def third_side(a, b):
    return math.sqrt(a**2 + b**2)
```

 The second cell, labeled 'In [14]:', contains the following code:

```
print(third_side(3, 4)) # Output: 5.0
```

 The output of the second cell is '5.0'.

```
False

In [13]: import math

def third_side(a, b):
    return math.sqrt(a**2 + b**2)

In [14]: print(third_side(3, 4)) # Output: 5.0

5.0
```

15. Write a python program to print the frequency of each of the characters present in a given string.

```
In [7]: from collections import Counter

def char_frequency(s):
    return dict(Counter(s))

In [15]: print(char_frequency("hello")) # Output: {'h': 1, 'e': 1, 'l': 2, 'o': 1}

{'h': 1, 'e': 1, 'l': 2, 'o': 1}
```