

1. Which of the following is not a core datatype in python?

Ans – B

2. Which of the following is an invalid variable name in python?

Ans – D

3. Which one of the following is a keyword in python?

Ans – A

4. In which of the following manner are the operators of the same precedence executed in python?

Ans – A

5. Arrange the following in decreasing order of the precedence when they appear in an expression in python?

Ans – C

6. $(28//6) ** 3 / 3 \% 3 = ?$

Ans – C

7. `a = input ("Enter an integer")`. What will be the data type of a?

Ans – B

8. Which of the following statements are correct?

Ans – A and D

9. Which of the following is(are) valid statement(s) in python?

Ans – B

10. Which of the following is not equal to x16 in python?

Ans – C

11. Differentiate between a list, tuple, set and dictionary?

Ans - A list is a collection of ordered data. A tuple is an ordered collection of data. A set is an unordered collection. A dictionary is an unordered collection of data that stores data in key-value pairs.

12. Are strings mutable in python? Suppose you have a string “I+Love+Python”, write a small code to replace ‘+’ with space in python.

Ans - `input_string.replace("+", " ")`. The resulting modified string is stored in a new variable `output_string`, and we print the value of `output_string` to confirm that the replacement was successful.

13. What does the function `Ord ()` do in python? Explain with an example. Also, write down the function for getting the data type of a variable in python.

- **Ans** - The `Ord ()` function returns the number representing the Unicode code of a specified character.
- `Ord ()` Syntax. The syntax of `Ord ()` is: `Ord (Ch)`
- `Ord ()` Parameters. The `Ord ()` function takes a single parameter:

- `Ord ()` Return Value. The `Ord ()` function returns an integer representing the Unicode character.
- Example: How `Ord ()` works in Python? `print (Ord ('5')) # 53. print (Ord('A')) # 65. print (Ord ('$')) # 36.` Run Code.

14. Write a python program to solve a quadratic equation of the form $ax^2+bx+c=0$. Where a, b and c are to be taken by user input. Handle the erroneous input, such as 'a' should not be equal to 0

Ans -

 jupyter Untitled Last Checkpoint: 07/04/2022 (unsaved changes)



```
In [2]: import math

# Get user input for coefficients
a = float(input("Enter the value of coefficient a: "))
b = float(input("Enter the value of coefficient b: "))
c = float(input("Enter the value of coefficient c: "))

if a == 0:
    print("Error: a cannot be zero")
else:
    discriminant = b**2 - 4*a*c

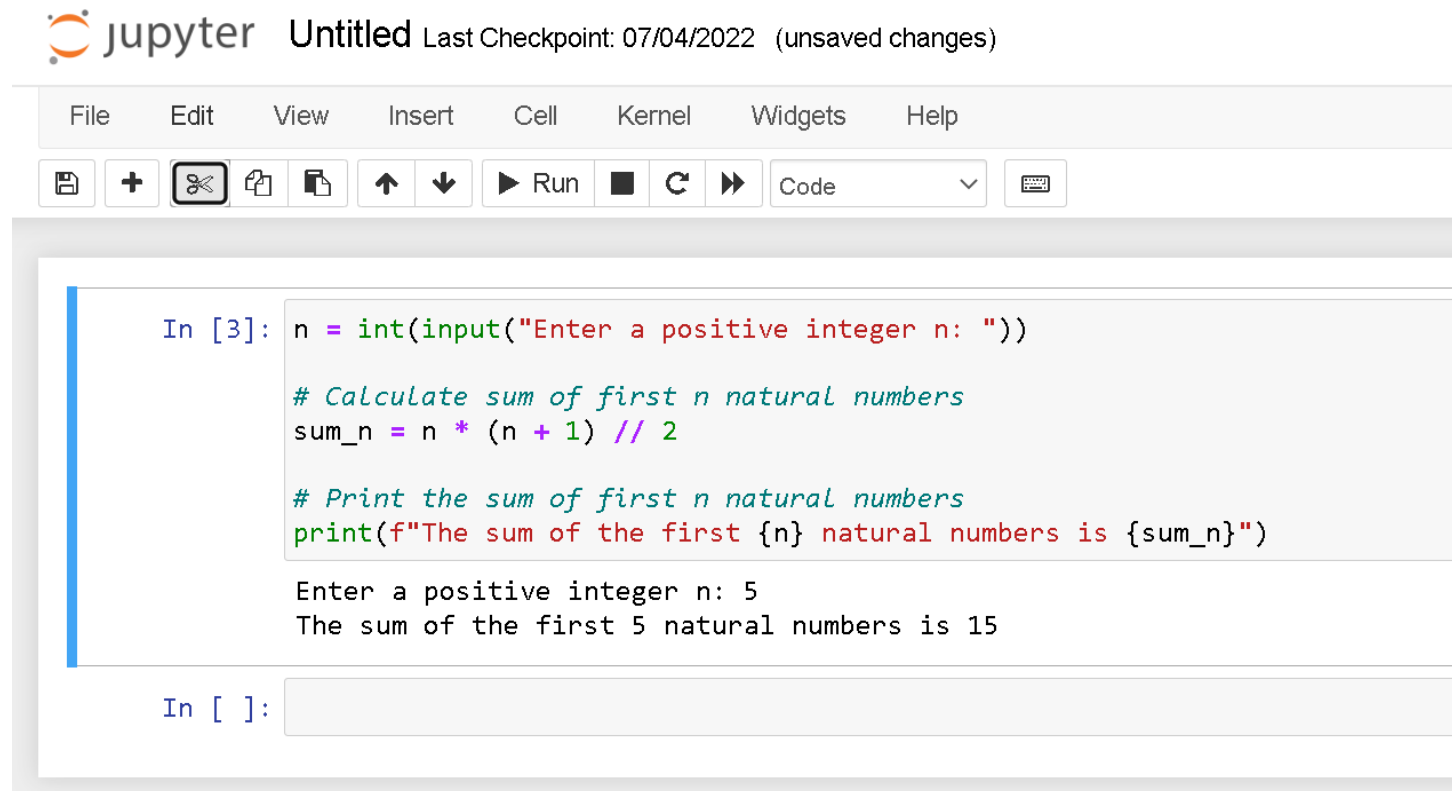
    if discriminant < 0:
        print("The quadratic equation has no real roots")
    else:
        root1 = (-b + math.sqrt(discriminant)) / (2*a)
        root2 = (-b - math.sqrt(discriminant)) / (2*a)
```

```
Enter the value of coefficient a: 11
Enter the value of coefficient b: 2
Enter the value of coefficient c: 17
The quadratic equation has no real roots
```

In []:

15. Write a python program to find the sum of first 'n' natural numbers without using any loop. Ask users to input the value of 'n'.

Ans-



The image shows a Jupyter Notebook interface. At the top, there is a header bar with the Jupyter logo, the text "jupyter", and "Untitled" followed by "Last Checkpoint: 07/04/2022 (unsaved changes)". Below this is a menu bar with options: File, Edit, View, Insert, Cell, Kernel, Widgets, and Help. Under the menu bar is a toolbar with icons for saving, adding, running, and other notebook functions. The main area of the notebook contains a code cell with the following Python code:

```
In [3]: n = int(input("Enter a positive integer n: "))

# Calculate sum of first n natural numbers
sum_n = n * (n + 1) // 2

# Print the sum of first n natural numbers
print(f"The sum of the first {n} natural numbers is {sum_n}")
```

Below the code cell, the output of the program is displayed:

```
Enter a positive integer n: 5
The sum of the first 5 natural numbers is 15
```

At the bottom of the notebook, there is an empty code cell labeled "In []:".