Assignment 1:

## Assignment Part-1

Q1. Why do we call Python as a general purpose and high-level programming language?

**Ans:** Python is a general purpose language because it is broadly used for different domains and it is not restricted to any specific domains. Python is high level language because it is user-oriented language which is easy to understand by the programmers.

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Q2. Why is Python called a dynamically typed language?

**Ans:** There is no strict declaration of variables before assigning the values to the variables. Python doesn’t require to declare the datatype of the variables. It will be automatically identified the type of the variable during runtime.

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Q3. List some pros and cons of Python programming language?

**Ans:**

Pros:

* Open source
* Easy to learn the syntax.
* Vast libraries support
* Greater productivity – Programmers need not to concentrate too much on syntax.
* It is an interpreted language – interprets the code line by line so that it shows one error at a time even if we have more errors in the code.
* Dynamically typed.

Cons:

* Poor memory efficiency
* Slow speed compared to other compiled language.
* Weak mobile computing
* Runtime errors

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Q4. In what all domains can we use Python?

**Ans:** Artificial intelligence/machine learning, web development, embedded systems, mobile app development, desktop GUI, Data analytics and data visualization, Game development.

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Q5. What are variable and how can we declare them?

**Ans:** Variable is the name given to memory location. It holds the value. Variable name should start with alphabets or underscore. Special characters are not allowed in the variable name. Variable name should not start with numbers.

Eg: num\_1 is the variable name.

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Q6. How can we take an input from the user in Python?

**Ans:**

We can take input from the user using “input()” function. We can also specify the type casting.

Eg: num1 = input(“Enter the value of num1”)

num2 = int(input(“Enter the value of num2”))

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Q7. What is the default datatype of the value that has been taken as an input using input() function?

**Ans:** Default datatype is string for input function.

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Q8. What is type casting?

**Ans:** Type casting is a method used to convert datatype of the variable from one type to a certain data type.

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Q9. Can we take more than one input from the user using single input() function? If yes, how? If no, why?

**Ans:** No, we can take only one input from the user using input() function. But we can use multiple input() function in a single line.

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Q10. What are keywords?

**Ans:** Keywords are reserved words that have special meaning in python. Eg: True, False.

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Q11. Can we use keywords as a variable? Support your answer with reason.

**Ans:** No we cannot use keywords as a variable. Python has special meaning for each keywords and it will throw error if we use keywords as variable.

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Q12. What is indentation? What's the use of indentaion in Python?

**Ans:** Python uses indentation to identify a block of code. In other languages, it is used for user readablility but in python it refers block of code.

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Q13. How can we throw some output in Python?

**Ans:** print() is used to print the output in python.

Eg: print(“the result is”, num1)

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Q14. What are operators in Python?

**Ans:** Operators are used to perform some mathematical calculations. Operators are used along with the operands to perform some calculations

* Arithmetic operators
* Logical operators
* Comparative operators
* Bitwise operators

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Q15. What is difference between / and // operators?

**Ans**: / is the division operator and // is the floor division operator.

/ operator will given the output in decimal format

// operator will give the output in rounded value.

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Q16. Write a code that gives following as an output.

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iNeuroniNeuroniNeuroniNeuron

```

**Ans:**

str1 = “iNeuron”

print(str1\*4)

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Q17. Write a code to take a number as an input from the user and check if the number is odd or even.

**Ans:**

num1 = int(input(“Enter the num1”))

if (num1%2 == 0):

print(“The number is even”)

else:

print(“The number is odd”)

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Q18. What are boolean operator?

**Ans:** Boolean operators are AND, OR and NOT. These operators will give the output in the form of Boolean (True or False). Also Comparison operators will provide the output in the Boolean format.

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Q19. What will the output of the following?

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1 or 0

Ans: 1 (True)

0 and 0

Ans: 0 (False)

True and False and True

Ans: False

1 or 0 or 0

Ans: 1 (True)

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Q20. What are conditional statements in Python?

**Ans:** If else elif are conditional statements. They are used to check specific condition and will provide the output based on the conditional check.

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Q21. What is use of 'if', 'elif' and 'else' keywords?

**Ans:**

If – is used to check any specific condition

Elif – is used to check more than one condition for a particular problem statement.

Else – is used to print the default value (none of the condition satisfies).

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Q22. Write a code to take the age of person as an input and if age >= 18 display "I can vote". If age is < 18 display "I can't vote".

**Ans:**

age = int(input(“Enter your age”)

if age > 18:

print(“I can vote”)

else:

print(“I can’t vote”)

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Q23. Write a code that displays the sum of all the even numbers from the given list.

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numbers = [12, 75, 150, 180, 145, 525, 50]

```

**Ans:**

num1 = 0

for(i=0;i<7;i++):

if (numbers[i]%2 ==0):

num1 = num1+numbers[i]

print(“The sum of all even numbers:”, num1)

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Q24. Write a code to take 3 numbers as an input from the user and display the greatest no as output.

**Ans:**

num1 = int(input(“Enter the num1”))

num2 = int(input(“Enter the num2”))

num3 = int(input(“enter the num3”))

if (num1>num2):

if (num1>num3):

print(“The greatest number is “, num1)

else:

print(“The greatest number is”, num3)

elif (num2 > num3):

print(“The greatest number is “, num2)

else:

print(“The greatest number is “, num3)

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Q25. Write a program to display only those numbers from a list that satisfy the following conditions

- The number must be divisible by five

- If the number is greater than 150, then skip it and move to the next number

- If the number is greater than 500, then stop the loop

```

numbers = [12, 75, 150, 180, 145, 525, 50]

```

**Ans:**

for(i=0;i<7;i++):

if(numbers[i] %5==0):

print(numbers[i])

print(/n)

elif (numbers[i] > 150):

continue;

elif(number[i] >500):

break;