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Technical Training on Cloud App Development - B7 - 1A3E

Assignment-1

Answers:

Q1.

Initial list:

In [1]:
```
list_age=[5,8,11,14,17]
```

```
Insertion of '15' in position 3
```

In [2]:
```
list_age.insert(3,15)
print(list_age)
```

```
[5, 8, 11, 15, 14, 17]
```

```
Appending copy(duplicate) values in the list:
```

In [5]:
```
list_age.append(11)
list_age.append(5)
print(list_age)
```

```
[5, 8, 15, 14, 17, 11, 5, 11, 5]
```

```
Deleting first occurence of '11' in the list
```

In [4]:
```
list_age.remove(11)
print(list_age)
```

```
[5, 8, 15, 14, 17, 11, 5]
```

```
Append an integer '20' to the end of the list
```

In [6]:
```
list_age.append(20)
print(list_age)
```

```
[5, 8, 15, 14, 17, 11, 5, 11, 5, 20]
```

```
To sort the list:
```

In [7]:
```
list_age.sort()
print(list_age)
```

```
[5, 5, 5, 8, 11, 11, 14, 15, 17, 20]
```

```
To pop the last element from list:
```

In [8]:
```
list_age.pop(-1)
print(list_age)
```

```
[5, 5, 5, 8, 11, 11, 14, 15, 17]
```

```
To reverse the list:
```

In [9]:
```
list_age.reverse()
print(list_age)
```

```
[17, 15, 14, 11, 11, 8, 5, 5, 5]
```

Q2.

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In [10]:
```
# A python Calculator program

# To add two numbers
def add(x, y):
    return x + y

# To subtract two numbers
def subtract(x, y):
    return x - y

# To multiply two numbers
def multiply(x, y):
    return x * y

# To divide two numbers
def divide(x, y):
    return x / y

#To exponentiate numbers
def exponent(x,y):
    return x**y

#To find modulo of two numbers
def modulo(x,y):
    return x%y

print("Choose appropriate operation: \n")
print("1.Add")
print("2.Subtract")
print("3.Multiply")
print("4.Divide")
print("5.Exponent")
print("6.Modulo")
```

```
while True:
    print("\n")
    choice = input("Enter choice (1-6): ")
    print("\n")
    # Make sure choice is one of the six options
    if choice in ('1', '2', '3', '4','5','6'):
        num1 = float(input("Enter first number: "))
        num2 = float(input("Enter second number: "))

        if choice == '1':
            print("\n",num1, "+", num2, "=", add(num1, num2))

        elif choice == '2':
            print("\n",num1, "-", num2, "=", subtract(num1, num2))

        elif choice == '3':
            print("\n",num1, "*", num2, "=", multiply(num1, num2))

        elif choice == '4':
            print("\n",num1, "/", num2, "=", divide(num1, num2))
        elif choice == '5':
            print("\n",num1, "^", num2, "=", exponent(num1, num2))
        elif choice == '6':
            print("\n",num1, "%", num2, "=", modulo(num1, num2))


        # break the while loop if answer is no
        next_calculation = input("Do you want to continue? (Y or N)")
        if next_calculation == "No":
            print("\nThank you")
            break

    else:
        print("Invalid Input Choice!")
```

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```
    Choose appropriate operation:

    1.Add
    2.Subtract
    3.Multiply
    4.Divide
    5.Exponent
    6.Modulo


    Enter choice (1-6): 1


    Enter first number: 5
    Enter second number: 10

     5.0 + 10.0 = 15.0
    Do you want to continue? (Y or N)Y


    Enter choice (1-6): 2


    Enter first number: 10
    Enter second number: 2

     10.0 - 2.0 = 8.0
    Do you want to continue? (Y or N)Y


    Enter choice (1-6): 4


    Enter first number: 20
    Enter second number: 10

     20.0 / 10.0 = 2.0
Do you want to continue? (Y or N)N


Enter choice (1-6): 5


Enter first number: 4
Enter second number: 5

 4.0 ^ 5.0 = 1024.0
Do you want to continue? (Y or N)No

Thank you
```

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Q3.

```
To concatenate, reverse and slice a string:
```

In [7]:
```
string1="hello"
string2="Welcome"
final=string1+string2
print("Concatenated strings : ",string1+string2)
print("Reverse of String 1 : ",string1[::-1])
print("Reverse of String 2 : ",string2[::-1])
print("Reverse of concatenated strings : ",final[::-1])
print("Slicing Operations done on strings : ")
print(string1[2::1])
print(string2[::2])
print(final[1:8])
```

```
Concatenated strings :  helloWelcome
Reverse of String 1 :  olleh
Reverse of String 2 :  emocleW
Reverse of concatenated strings :  emocleWolleh
Slicing Operations done on strings :
llo
Wloe
elloWel
```

Q4. Python is considered to be a popular programming language as it emphasizes readability and makes coding very easy. It can often be employed to support machine learning too. It has simplified syntax and is free to use. Python is also a preferred language for web development since it provides various web development libraries and frameworks like Django and Flask. Strong library support makes development easier as compared to other languages. It is highly versatile, platform-independent and creates robust code. It has a lot of tools, packages and modules to support the automation of applications quickly. It is a simple language and is easy to understand. It has a lot of active communities of programmers across the world solving and sharing their coding problems. Hence, the above explained features have made Python a popular programming language.

Q5. Frameworks that can be used with python are Pyramid, Django, TurboGears, CherryPy, Flask, Bottle, Web2py, Dash and Falcon etc.

Q6. Full form of WSGI – Web Server Gateway Interface