prachiti-finlatics-capsule-2

May 2, 2024

```python
[1]: #Q1
     def is_leap_year(year):
         if (year % 4 == 0 and year % 100 != 0) or (year % 400 == 0):
             return True
         else:
             return False

     year = int(input("Enter a year: "))
     if is_leap_year(year):
         print(f"{year} is a leap year.")
     else:
         print(f"{year} is not a leap year.")
```

```
Enter a year: 2009
2009 is not a leap year.
```

```python
[2]: #Q2
     def count_vowels(word):
         vowels = 'aeiou'
         count = 0
         for char in word.lower():
             if char in vowels:
                 count += 1
         return count

     word = input("Enter a word: ")
     print(f"Number of vowels in '{word}': {count_vowels(word)}")
```

```
Enter a word: Prachiti
Number of vowels in 'Prachiti': 3
```

```python
[3]: #Q3
     names = [input(f"Enter name {i+1}: ") for i in range(6)]
     a_names = [name for name in names if name.lower().startswith('a')]
     print("Names starting with 'a':", a_names)
```

```
Enter name 1: Prachiti
Enter name 2: Abhilash
```

```
Enter name 3: Riya
Enter name 4: Pranav
Enter name 5: Ayush
Enter name 6: Devanshu
Names starting with 'a': ['Abhilash', 'Ayush']
```

[4]:
```python
#Q4
numbers = [int(input(f"Enter number {i+1}: ")) for i in range(10)]

for num in numbers:
    if num % 2 == 0:
        print(num ** 2)
    else:
        print(num ** 3)
```

```
Enter number 1: 4
Enter number 2: 6
Enter number 3: 2
Enter number 4: 8
Enter number 5: 3
Enter number 6: 5
Enter number 7: 8
Enter number 8: 7
Enter number 9: 6
Enter number 10: 1
16
36
4
64
27
125
64
343
36
1
```

[5]:
```python
#Q5
rose_price = 10

roses_count = int(input("Enter the count of roses you wish to order: "))
delivery_distance = float(input("Enter the delivery distance in kilometers: "))

delivery_charge = 25
if delivery_distance > 5:
    delivery_charge = 50
if delivery_distance > 10:
    delivery_charge = 75
```

```
total_price = rose_price * roses_count + delivery_charge
print(f"Total price to pay: Rs. {total_price}")
```

Enter the count of roses you wish to order: 5
Enter the delivery distance in kilometers: 4
Total price to pay: Rs. 75

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