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| Python Assignment |
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|  | 1. Write a Python Program to Find the Factorial of a Number? |
|  | # In[3]: |
|  |  |
|  |  |
|  | num = int(input("Enter a number: ")) |
|  |  |
|  | factorial = 1 |
|  |  |
|  | if num < 0: |
|  | print("Sorry, factorial does not exist for negative numbers") |
|  | elif num == 0: |
|  | print("The factorial of 0 is 1") |
|  | else: |
|  | for i in range(1,num + 1): |
|  | factorial = factorial \*i |
|  | print("The factorial of",num,"is",factorial) |
|  |  |
|  | 2. Write a Python Program to Display the multiplication Table? |
|  | # In[5]: |
|  |  |
|  |  |
|  | num = int(input("Display multiplication table of? ")) |
|  |  |
|  | for i in range(1, 11): |
|  |  |
|  | print(num, 'x', i, '=', num \* i) |
|  |  |
|  | 3. Write a Python Program to Print the Fibonacci sequence? |
|  |  |
|  | # In[10]: |
|  |  |
|  |  |
|  | a = int(input("How many terms? ")) |
|  |  |
|  | # first two terms |
|  | n1, n2 = 0, 1 |
|  | count = 0 |
|  |  |
|  | if a <= 0: |
|  | print("Please enter a positive integer") |
|  |  |
|  | elif a == 1: |
|  | print("Fibonacci sequence upto",a,":") |
|  | print(n1) |
|  | else: |
|  | print("Fibonacci sequence:") |
|  | while count < a: |
|  | print(n1) |
|  | nth = n1 + n2 |
|  | # update values |
|  | n1 = n2 |
|  | n2 = nth |
|  | count += 1 |
|  |  |
|  | 4. Write a Python Program to Check Armstrong Number? |
|  | # In[17]: |
|  |  |
|  |  |
|  | num = int(input("Enter a number: ")) |
|  |  |
|  | sum = 0 |
|  |  |
|  | temp = num |
|  | while temp > 0: |
|  | digit = temp % 10 |
|  | sum += digit \*\* 3 |
|  | temp //= 10 |
|  |  |
|  |  |
|  | if num == sum: |
|  | print(num,"is an Armstrong number") |
|  | else: |
|  | print(num,"is not an Armstrong number") |
|  |  |
|  | 5. Write a Python Program to Find Armstrong Number in an Interval? |
|  | # In[29]: |
|  |  |
|  |  |
|  | lower = int(input("Enter the lower number:" )) |
|  | upper = int(input("Enter the upper number:" )) |
|  |  |
|  |  |
|  | for num in range(lower, upper + 1): |
|  |  |
|  | # order of number |
|  | order = len(str(num)) |
|  |  |
|  | sum = 0 |
|  |  |
|  | temp = num |
|  | while temp > 0: |
|  | digit = temp % 10 |
|  | sum += digit \*\* order |
|  | temp //= 10 |
|  |  |
|  | if num == sum: |
|  | print(num) |
|  |  |
|  | 6. Write a Python Program to Find the Sum of Natural Numbers? |
|  | # In[35]: |
|  |  |
|  |  |
|  | n= int(input("Enter Natural Number: ")) |
|  |  |
|  | sum= n\*(n+1)/2 |
|  |  |
|  | print("Sum of natural number is", sum) |