# CS23336-Introduction to Python Programming

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|---|---|
| **Started on** | Wednesday, 4 September 2024, 1:54 PM |
| **State** | Finished |
| **Completed on** | Monday, 9 September 2024, 9:58 AM |
| **Time taken** | 4 days 20 hours |
| **Marks** | 5.00/5.00 |
| **Grade** | **100.00** out of 100.00 |

## Question 1

Correct
Mark 1.00 out of 1.00
Flag question

**Question text**

Write a function that returns the value of a+aa+aaa+aaaa with a given digit as the value of a.

Suppose the following input is supplied to the program:

9

Then, the output should be:

9+99+999+9999=11106

Sample Input Format:

9

Sample Output format:

11106

For example:

| Test | Result |
|---|---|
| `print(Summation(8))` | 9872 |

Answer:(penalty regime: 0 %)

Reset answer

```
def Summation(n):
    a=str(n)
    sum = int(a)+int(a+a)+int(a+a+a)+int(a+a+a+a)
    return sum

```

**Feedback**

| Test | Expected | Got |
|---|---|---|
| `print(Summation(8))` | `9872` | `9872` |
| `print(Summation(10))` | `10203040` | `10203040` |

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

## Question 2

Correct
Mark 1.00 out of 1.00
Flag question

**Question text**

An e-commerce company plans to give their customers a special discount for Christmas.

They are planning to offer a flat discount. The discount value is calculated as the sum of all

the prime digits in the total bill amount.

Write an algorithm to find the discount value for the given total bill amount.

Constraints

1 <= orderValue< 10e100000

Input

The input consists of an integer orderValue, representing the total bill amount.

Output

Print an integer representing the discount value for the given total bill amount.

Example Input

578

Output

12

For example:

| Test | Result |
|---|---|
| `print(christmasDiscount(578))` | `12` |

Answer:(penalty regime: 0 %)

Reset answer

```
def christmasDiscount(n):
    a=str(n)
    sum=0
    for i in a:
        i=int(i)
        if i in [2,3,5,7]:
            sum+=i
    return sum

```

**Feedback**

| Test | Expected | Got |
|---|---|---|
| `print(christmasDiscount(578))` | 12 | 12 |

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

## Question 3

Correct
Mark 1.00 out of 1.00
Flag question

**Question text**

A number is considered to be ugly if its only prime factors are 2, 3 or 5.

[1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 15, ...] is the sequence of ugly numbers.

Task:

complete the function which takes a number n as input and checks if it's an ugly number.

return ugly if it is ugly, else return not ugly

Hint:

An ugly number U can be expressed as: U = 2^a * 3^b * 5^c, where a, b and c are nonnegative integers.

For example:

| Test | Result |
|---|---|
| `print(checkUgly(6))` | ugly |
| `print(checkUgly(21))` | not ugly |

Answer:(penalty regime: 0 %)

Reset answer

```
def checkUgly(n):
    if n<0:
        return "not ugly"

    for p in [2,3,5]:
        while n%p==0:
            n//=p
    return "ugly" if n==1 else "not ugly"
```

**Feedback**

| Test | Expected | Got |
|---|---|---|

| | | |
|---|---|---|
| `print(checkUgly(6))` | ugly | ugly |
| `print(checkUgly(21))` | not ugly | not ugly |

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

## Question 4

Correct
Mark 1.00 out of 1.00
Flag question

**Question text**

complete function to implement coin change making problem i.e. finding the minimum

number of coins of certain denominations that add up to given amount of money.

The only available coins are of values 1, 2, 3, 4

Input Format:

Integer input from stdin.

Output Format:

return the minimum number of coins required to meet the given target.

Example Input:

16

Output:

4

Explanation:

We need only 4 coins of value 4 each

Example Input:

25

Output:

7

Explanation:

We need 6 coins of 4 value, and 1 coin of 1 value

Answer:(penalty regime: 0 %)

Reset answer

```
def coinChange(n):
    target=n
    coins=[4,3,2,1]
    count=0
    for i in coins:
        count+=target//i
        target%=i
        if target==0:
            break
    return count

```

**Feedback**

| Test | Expected | Got |
|---|---|---|
| `print(coinChange(16))` | `4` | `4` |

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

## Question 5

Correct
Mark 1.00 out of 1.00
Flag question

**Question text**

A strobogrammatic number is a number that looks the same when rotated 180 degrees (looked at upside down).

Write a program to determine if a number is strobogrammatic. The number is represented as a string.

**Example 1:**

**Input:**

69

**Output:**

true

**Example 2:**

**Input:**

88

**Output:**

true

**Example 3:**

**Input:**

962

**Output:**

false

**Example 4:**

**Input:**

1

**Output:**

true

For example:

| Test | Result |
|---|---|
| `print(Strobogrammatic(69))` | `true` |

```
print(Strobogrammatic(962)) false
```

Answer:(penalty regime: 0 %)

Reset answer

```
def Strobogrammatic(n):
    mapping={'0':'0','1':'1','8':'8','9':'6','6':'9'}
    a=str(n)
    rotated=""
    for i in reversed(a):
        if i not in mapping:
            return "false"
        rotated+=mapping[i]
    if rotated == a:
        return "true"
```

**Feedback**

| Test | Expected | Got |
|---|---|---|
| `print(Strobogrammatic(69))` | `true` | `true` |
| `print(Strobogrammatic(88))` | `true` | `true` |
| `print(Strobogrammatic(962))` | `false` | `false` |

Passed all tests!

Correct
Marks for this submission: 1.00/1.00.

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