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CS23336-Introduction to Python Programming

Started on	Wednesday, 4 September 2024, 2:01 PM
State	Finished
Completed on	Wednesday, 4 September 2024, 2:34 PM
Time taken	33 mins 43 secs
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

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):
    coins=[1,2,3,4]
    coins.sort(reverse=True)
    count=0
    for coin in coins:
        count+=n//coin
        n%=coin
    return count
```

Feedback

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

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

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=n//p
    if n==1:
        return "ugly"
    else:
        return "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 3

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]

```
1
2
3
4
5
6
7
```

8

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

Feedback

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

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

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]

```
1
2
3
4
5
```

```
                                                                    6
                                                                    7
```

```
def Strobogrammatic(n):
    n=str(n)
    r={'0':'0','1':'1','6':'9','8':'8','9':'6'}
    for i in range(len(n)//2+1):
        if n[i] not in r or r[n[i]]!=n[-i-1]:
            return "false"
    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.

Question 5

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]

```
1
2
3
4
5
6
```

```
def Summation(n):
    a=int(str(n))
    b=int(str(n)*2)
    c=int(str(n)*3)
    d=int(str(n)*4)
    return a+b+c+d
```

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.

[Finish review]

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