EX.NO: 03	FUNCTIONS
DATE:	

PROGRAM 1:

Movie Ticket Pricing

You're writing a function to calculate movie ticket prices based on age.

Kids under 12: $5

Seniors (60+): $6

Everyone else: $10

Question:

Write a function calculate_ticket_price(age) that returns the correct ticket price.

Sample Input:

calculate_ticket_price(8) # Output: 5

calculate_ticket_price(30) # Output: 10

calculate_ticket_price(65) # Output: 6

```
def calculate_ticket_price(age):
  if age < 0:
      return "Enter age in Positive!"
  elif age <= 12 :
      return "Ticket price for Kids is $5"
  elif age >= 60:
      return "Ticket price for Seniors is $6"
  else:
      return "Ticket Price for Others is $10"
print(calculate_ticket_price(8))
print(calculate_ticket_price(30))
print(calculate_ticket_price(65))
```

OUTPUT:

```
Ticket price for Kids is $5
Ticket Price for Others is $10
Ticket price for Seniors is $6
```

PROGRAM 2:

You're building a weather app and need a function to convert temperatures from Celsius to

Fahrenheit

Question:

Write a function celsius_to_fahrenheit(celsius) that returns the Fahrenheit equivalent.

Sample Input:

celsius_to_fahrenheit(0) # Output: 32.0

celsius_to_fahrenheit(37) # Output: 98.6

```
def celsius_to_fahrenheit(celsius):
    return f"Celsius to Fahrenheit : {(celsius * 9/5) + 32}"
print(celsius_to_fahrenheit(0))
print(celsius_to_fahrenheit(37))
```

OUTPUT:

```
Celsius to Fahrenheit : 32.0
Celsius to Fahrenheit : 98.6
```

PROGRAM 3:

You're creating a grading system. Given a score (0–100), return a letter grade:

A: 90+

B: 80–89

C: 70–79

D: 60–69

F: below 60

Question:

Write a function get_grade(score) that returns the letter grade.

Sample Input:

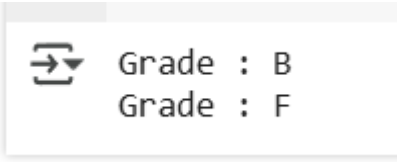
get_grade(85) # Output: "B"

get_grade(59) # Output: "F

```
def get_grade(score):
    marks = score//10
    match marks :
        case 9 | 10:
            return "Grade : A"
        case 8:
            return "Grade : B"
        case 7:
            return "Grade : C"
```

```
        case 6:
            return "Grade : D"
        case 5:
            return "Grade : F"
        case _:
            return "Give Score within 100!"
print(get_grade(86))
print(get_grade(59))
```

OUTPUT:



PROGRAM 4:

In a text editing app, users want a function that takes a sentence and reverses each word, keeping the word order the same.

Question:

Write a function reverse_words(sentence) that reverses the characters of each word.

Sample Input:

reverse_words("hello world") # Output: "olleh dlrow"

reverse_words("python is fun") # Output: "nohtyp si nuf"

```
def reverse_words(sentence):
    words = sentence.split()
    a = [word[::-1] for word in words]
    b = " ".join(a)
    return b
print(reverse_words("hello world"))
print(reverse_words("python is fun"))
```

OUTPUT:

```
olleh dlrow
nohtyp si nuf
```

PROGRAM 5:

Shipping Cost Calculator :A company charges shipping based on weight:

Up to 2kg: $5

2–5kg: $10

5kg and above: $15

Question:

Write a function calculate_shipping(weight) that returns the shipping cost.

Sample Input:

calculate_shipping(1.5) # Output: 5

calculate_shipping(3.2) # Output: 10

calculate_shipping(7.0) # Output: 15

```
def calculate_shipping(weight):
    if weight < 0 or weight == 0:
        return "Enter weight in Positive"
    elif weight < 2:
        return "$5"
    elif weight == 2 or weight < 5:
        return "$10"
    else:
        return "$15"
print(calculate_shipping(1))
```

OUTPUT:

```
$5
```

PROGRAM 6:

Password Strength Checker

Scenario: You're building a signup form. The password must be at least 8 characters long and contain at least one uppercase letter, one lowercase letter, and one digit.

Question:

Write a function is_strong_password(password) that returns True if the password is strong, otherwise False.

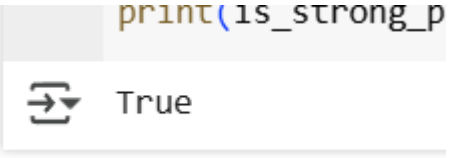
Sample Input:

is_strong_password("Password123") # Output: True

```
def is_strong_password(password):
    a = any(c.isupper() for c in password)
    b = any(c.islower() for c in password)
    c = any(c.isdigit() for c in password)
    return a and b and c

print(is_strong_password("Pass123"))
```

OUTPUT:



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Program	10	
Output	5	
Viva-Voce	5	
Total	20	