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<=12:
   return 5
 elif age>60:
   return 6
 else:
   return 10
print(calculate_ticket_price(8))
print(calculate_ticket_price(30))
print(calculate_ticket_price(65))
```

OUTPUT:

5
10
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 (celsius*9/5)+32
print(celsius_to_fahrenheit(0))
print(celsius_to_fahrenheit(37))
```

OUTPUT:

32.0
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):
  if score>90:
    return "A"
  elif score>=80 and score<90:
    return "B"
  elif score>=70 and score<80:
    return "C"
  elif score>=60 and score<70:
```

```
    return "D"
  else:
    return "F"
print(get_grade(85))
print(get_grade(59))
```

OUTPUT:

B
F

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()
    reversed_words = [word[::-1] for word in words]
    return ' '.join(reversed_words)
print(reverse_words("hello world"))
print(reverse_words("python is fun")
```

OUTPUT:

olleh dlrow
nohtyp si nuf

PROGRAM 5:

1. **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<=2:
    return 5
  elif weight>2 and weight<=5:
    return 10
  else:
    return 15
print(calculate_shipping(1.5))
print(calculate_shipping(3.2))
print(calculate_shipping(7.0))
```

OUTPUT:

5
10
15

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):
 if len(password) < 8:
 return False
```

```
    is_upper = False
    is_lower = False
    is_digit = False
    for char in password:
    if char.isupper():
    is_upper = True
    elif char.islower():
    is_lower = True
    elif char.isdigit():
    is_digit = True
    return is_upper and is_lower and is_digit
print(is_strong_password("Arjun@2006"))
```

OUTPUT:

True

DEPARTMENT OF CSE		
Program	10	
Output	5	
Viva-Voce	5	
Total	20	