EX.NO: 03	FUNCTIONS
DATE:	

PROGRAM 1:

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

```
age=int(input("Enter your age:"))
def calculate_ticket_price(age):
 if(age<=12):
  print("The ticket price is $5")
 elif(age>=60):
  print("The ticket price is $6")
 else:
  print("The ticket price is $10")
calculate_ticket_price(age)
```

OUTPUT:

```
Enter your age:34
The ticket price is $10
```

PROGRAM 2:

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

```
celsius=int(input("Enter the temperature in celsius:"))
def celsius_to_fahrenheit(celsius):
  fahrenheit=(celsius*9/5)+32
  print("The temperature in fahrenheit is:",fahrenheit)
celsius_to_fahrenheit(celsius)
```

OUTPUT:

```
Enter the temperature in celsius:28
The temperature in fahrenheit is: 82.4
```

PROGRAM 3:

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

```
score=int(input("Enter your score:"))
def get_grade(score):
  if(score>90):
    print("Your grade is A")
  elif(score>80):
    print("Your grade is B")
  elif(score>70):
    print("Your grade is C")
  elif(score>60):
    print("Your grade is D")
get_grade(score)
```

OUTPUT:

```
Enter your score:98
Your grade is A
```

PROGRAM 4:

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"

```
sentence = input("Enter a sentence: ")

def reverse_words(sentence):
    words = sentence.split()
    reversed_words = []

    for word in words:
        reversed_words.append(word[::-1])

    reversed_sentence = ' '.join(reversed_words)
    return reversed_sentence


print(reverse_words(sentence))
```

OUTPUT:

```
Enter a sentence: hellp python
plleh nohtyp
```

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

```
weight=int(input("Enter the weight:"))
def calculate_shipping(weight):
  if(weight<=2):
    print("The shipping cost is $5")
  elif(weight>2 and weight<=5):
    print("The shipping cost is $10")
  elif(weight>5):
    print("The shipping cost is $15")
calculate_shipping(weight)
```

OUTPUT:

```
Enter the weight:340
The shipping cost is $15
```

PROGRAM 6:

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

```
password=input("enter your password:")
def strong_password(password):
  if len(password) < 8:
    return False

  has_uppercase = False
  has_lowercase = False
  has_digit = False

  for char in password:
    if char.isupper():
      has_uppercase = True
    elif char.islower():
      has_lowercase = True
    elif char.isdigit():
      has_digit = True


  if has_uppercase and has_lowercase and has_digit:
    return True
  else:
    return False


result = strong_password(password)

if result:
  print("Strong password")
else:
  print("Weak password")
```

OUTPUT:

```
enter your password:aAkhasu486$
Strong password
```

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Program	10	
Output	5	
Viva-Voce	5	
Total	20	