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
def calculate_ticket_price(age) :
    if (age>=0 and age<=12) :
        return 5
    elif (age>12 and age<=60) :
        return 10
    elif (age>60) :
        return 6
    else :
        print("Enter the Valid Age!!!!!")
        return "None"
age = int(input("Enter Your Correct Age:"))
cost = calculate_ticket_price(age)
print(f"The Cost of the Ticket is ${cost} Rupees.")
```

OUTPUT:

Enter Your Correct Age:35
The Cost of the Ticket is $10 Rupees.

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
def celsius_to_fahrenheit(celsius) :
    fahrenheit = (celsius*(9/5))+32
    return fahrenheit
celsius = int(input("Enter the Celsius Value:"))
value = celsius_to_fahrenheit(celsius)
print(f"The Equivalent Fahrenheit Value for the Entered Celsius Value {celsius} is {value:.2f}.")
```

OUTPUT:

Enter the Celsius Value:32
The Equivalent Fahrenheit Value for the Entered Celsius Value 32 is 89.60.

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
def get_grade(score) :
    if (score<=100 and score>=90) :
        return "A"
    elif (score<90 and score>=80) :
        return "B"
    elif (score<80 and score>=70) :
        return "C"
    elif (score<70 and score>=60) :
        return "D"
    elif (score<60 and score>=0) :
        return "F"
    else :
        print("Enter a Valid Score!!!!!")
        return "None"
score = int(input("Enter the Student's Score:"))
grade = get_grade(score)
print(f"The Student's Grade is Grade-{grade}.")
```

OUTPUT:

```
Enter the Student's Score:100
The Student's Grade is Grade-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"

```
def reverse_words(sentence) :
    reverse = []
    lst = sentence.split()
    for i in lst :
        value = i[::-1]
        reverse.append(value)
    after_reverse = ' '.join(reverse)
    return after_reverse
sentence = input("Enter the Sentence:")
result = reverse_words(sentence)
print(f"After Reversal == {result}")
```

OUTPUT:

```
Enter the Sentence:Dharun Abdul
After Reversal == nurahD ludbA
```

PROGRAM 5:

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<2 and weight>=0) :
        return 5
    elif (weight<5 and weight>=2) :
        return 10
    elif (weight>=5) :
        return 15
    else :
        print("Enter the Valid weight!!!!!")
        return "None"
weight = float(input("Enter the Weight for the Product:"))
amount = calculate_shipping(weight)
print(f"The Amount for your Shipping is ${amount} Rupees.")
```

OUTPUT:

```
Enter the Weight for the Product:15
The Amount for your Shipping is $15 Rupees.
```

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
def is_strong_password(password) :
    cap = False
    sma = False
    num = False
    if (len(password)>=8) :
        lst_password = list(password)
        for i in lst_password :
            if (i.isupper()) :
                cap = True
            elif (i.islower()) :
                sma = True
            elif (i.isdigit()) :
                num = True
            else :
                return False
    if (cap == True and sma == True and num == True) :
        return True
    else :
        return False
password = input("Enter the Password for the Verification:")
result = is_strong_password(password)
if (result == True) :
    print("The Entered Password is Valid One!!!!!")
else :
```

```
    print("Invalid Password!!!!!")
```

OUTPUT:

```
Enter the Password for the Verification:Dhar1911
The Entered Password is Valid One!!!!!
```

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Program	10	
Output	5	
Viva-Voce	5	
Total	20	