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| **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** cal\_ticket\_price(a):

**if** a**<=**12:

**return** 5

**elif** a**>=**60:

**return** 6

**return** 10

a**=**int(input("Enter person's age :"))

print("Price of the movie ticket is $",cal\_ticket\_price(a))

**OUTPUT:**

Enter person's age :24

Price of the movie ticket is $ 10

**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(c):

**return** c**\***(9**/**5)**+**32

c**=**float(input("Enter the celsius :"))

print("In fahrenheit : %.1f"**%celsius\_to\_fahrenheit**(c))

**OUTPUT:**

Enter the celsius :38

In fahrenheit : 100.4

**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 :

**return** "B"

**elif** score **>=** 70 :

**return** "C"

**elif** score **>=** 60 :

**return** "D"

**return** "F"

score**=**int(input("Enter the score of the student :"))

print("Grade of the student is",get\_grade(score))

**OUTPUT:**

Enter the score of the student :80

Grade of the student is B

**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(word):

rev**=**[]

**for** i **in** word**.**split():

rev**.**append(i[::**-**1])

**return** " "**.**join(rev)

word**=**input("Enter the sentence :")

print("Reversed sentence is : ",reverse\_words(word))

**OUTPUT:**

Enter the sentence :python is fun

Reversed sentence is : 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** cal\_shipping(weight):

**if** weight **<=** 2 :

**return** 5

**elif** weight **<=**5 :

**return** 10

**return** 15

weight**=**float(input("Enter the weight(in kilogram):"))

print("Shipping charge is $",cal\_shipping(weight))

**OUTPUT:**

Enter the weight(in kilogram):7.0

Shipping charge is $ 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):

lst**=**[**False**,**False**,**False**,**False**]

lst[0]**=True** **if** len(password)**>=**8 **else** **False**

**for** i **in** password:

**if** i**.**isupper():

lst[1]**=True**

**if** i**.**islower():

lst[2]**=True**

**if** i**.**isdigit():

lst[3]**=True**

**return** all(lst)

password**=**input("Enter your passowrd :")

is\_strong\_password(password)

**OUTPUT:**

Enter your passowrd :Python@42

True

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