



तत् त्वं पूषन् अपावृणु  
केन्द्रीय विद्यालय संगठन

# PM Shri Kendriya Vidyalaya Sangathan

**Project:-**  
**EMPLOYEE SALARY CALCULATION  
SYSTEM**



Prepared by: Ayush Kumar Mishra

Class & Section: XI A

Subject: Computer Science

Teacher's Name: Chirag Sir

Academic Year: 2025-26



# Aim

To design a system that fetches employee details from a database and calculates HRA, DA, TA, and Gross Salary using a flowchart and program.

# Requirements

## Hardware Requirements:

- Computer / Laptop

## Software Requirements:

- Any Operating System
- Python / Programming Language

## Input:

- Employee ID

## Output:

- Employee Name
- Basic Salary
- HRA, DA, TA
- Gross Salary



# Algorithm

**Step-1** :- Start the program.

**Step-2** :- Input the employee ID from the user.

**Step-3** :- Try to convert the entered ID into an integer. If conversion fails, set the ID value as NONE.

**Step-4** :- Fetch all employee records from the database.

**Step-5** :- Repeat the following steps for each employee record:

- a)** Compare entered ID with employee ID.
- b)** If matched, display employee name and basic salary.
- c)** Calculate HRA = 15% of basic salary.
- d)** Calculate DA = 10% of basic salary.
- e)** Calculate TA = 20.2% of basic salary.
- f)** Calculate Gross Salary = Basic + HRA + DA + TA.
- g)** Display HRA, DA, TA and Gross Salary.
- h)** Exit the loop.

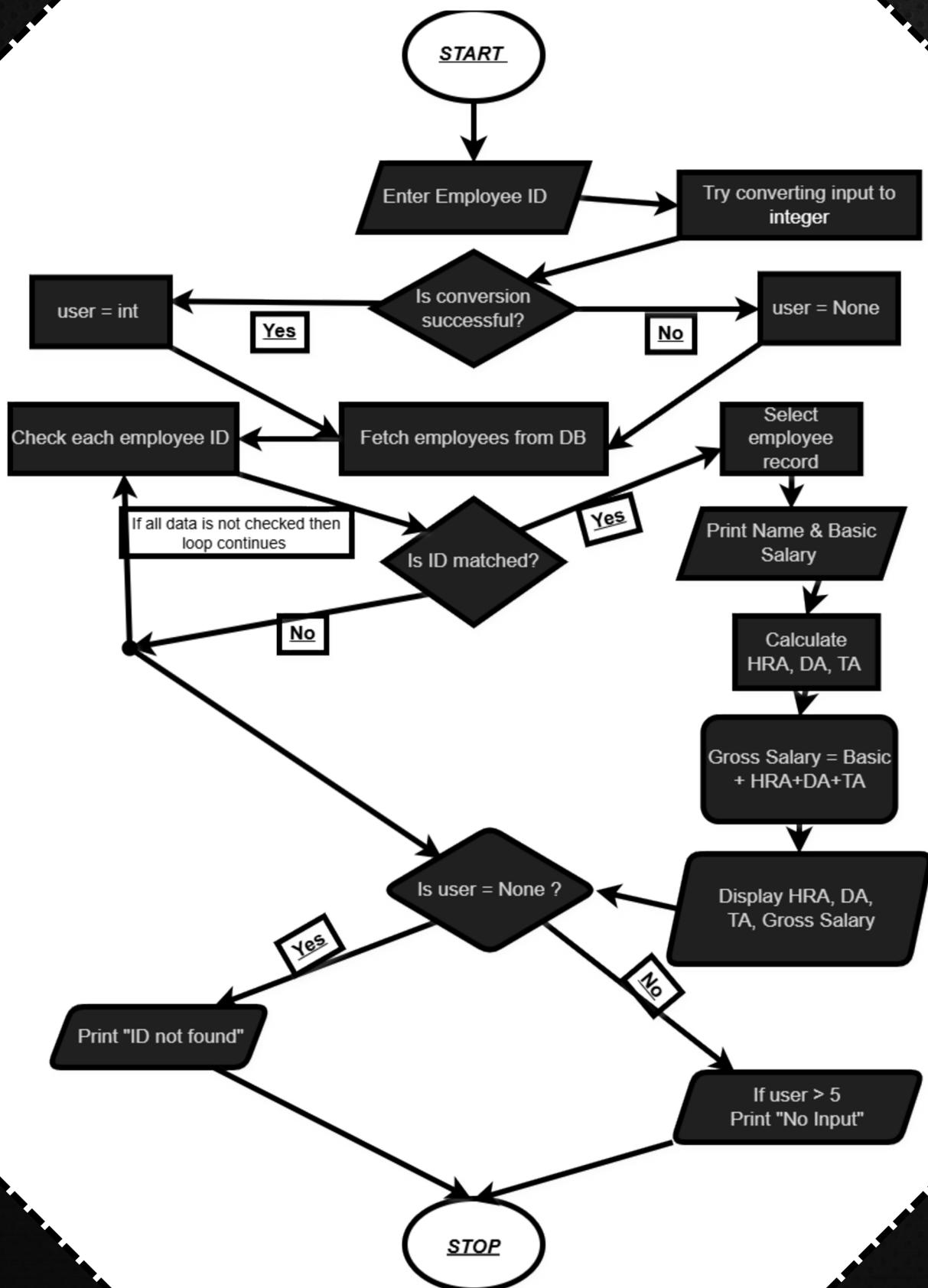
**Step-6** :- If employee ID is NONE, display “ID not found”.

**Step-7** :- Else if employee ID is greater than 5, display “No Input”.

**Step-8** :- Stop the program.



# Flowchart



# Pseudocode

```
DEFINE function database()
    STORE employees as list of tuples
    RETURN employees
END FUNCTION

DEFINE function salary(x)
    hra ← 0.15 × x
    da ← 0.10 × x
    ta ← 0.202 × x
    gross ← x + hra + da + ta

    PRINT hra, da, ta
    PRINT gross
END FUNCTION

INPUT employee_id

TRY
    employee_id ← INTEGER(employee_id)
CATCH error
    employee_id ← NONE
END TRY
```



# Pseudocode

FOR each emp IN database()

```
IF emp.id = employee_id THEN  
    PRINT emp.name, emp.basic_salary  
    CALL salary(emp.basic_salary)  
    STOP LOOP  
END IF
```

END FOR

```
IF employee_id = NONE THEN  
    PRINT "ID not found"  
ELSE IF employee_id > 5 THEN  
    PRINT "No Input"  
END IF
```



# Program

```
def database():

    employees = (#{id, name, basic salary}
                 (1, "John Doe", 50000),
                 (2, "Jane Smith", 60000),
                 (3, "Bob Johnson", 55000),
                 (4, "Alice Williams", 70000),
                 (5, "Charlie Brown", 65000)

    )

    return employees

def salary(x):

    # HRA = 15% of basic salary
    # DA = 10% of basic salary
    # TA = 20.2% of basic salary

    hra = 0.15 * x
    da = 0.10 * x
    ta = 0.202 * x

    gross_salary = x + hra + da + ta

    print(f"\n hra: {hra} \n da: {da} \n ta: {ta}")

    print("_____")

    print(f"Gross Salary: {gross_salary}")
```



# Program

```
user = input("Enter employee ID: ")

try:
    user = int(user)
except ValueError:
    user = None
except TypeError:
    user = None

for emp in database(): #This loop accesses each employee record from the
database one by one.

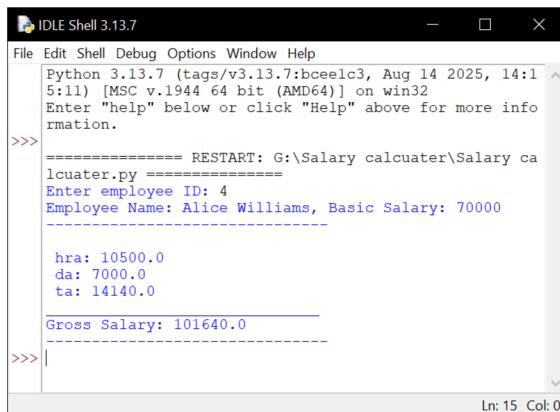
    if emp[0] == user:
        print(f"Employee Name: {emp[1]}, Basic Salary: {emp[2]}")
        print("-----")
        salary(emp[2])
        print("-----")
        break

if user == None:
    print("ID not found")
elif user > 5:
    print("No Input")
```



# OUTPUT

- If input is 1 to 5

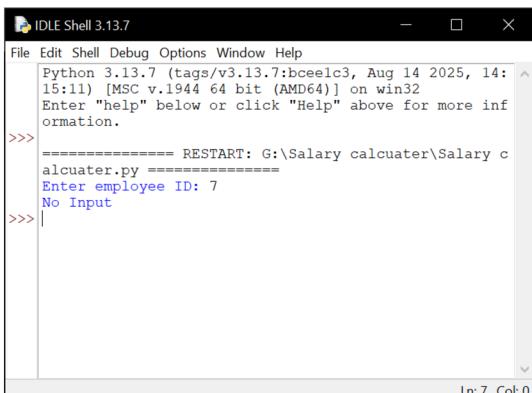


```
IDLE Shell 3.13.7
File Edit Shell Debug Options Window Help
Python 3.13.7 (tags/v3.13.7:bceelc3, Aug 14 2025, 14:15:11) [MSC v.1944 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.

>>> ===== RESTART: G:\Salary calcuater\Salary calculator.py =====
Enter employee ID: 4
Employee Name: Alice Williams, Basic Salary: 70000
-----
hra: 10500.0
da: 7000.0
ta: 14140.0

Gross Salary: 101640.0
-----
>>> |
```

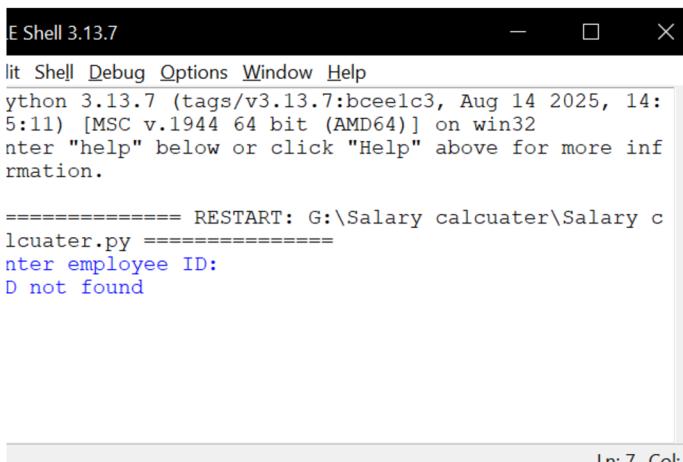
- If input is greater than 5



```
IDLE Shell 3.13.7
File Edit Shell Debug Options Window Help
Python 3.13.7 (tags/v3.13.7:bceelc3, Aug 14 2025, 14:15:11) [MSC v.1944 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.

>>> ===== RESTART: G:\Salary calcuater\Salary calculator.py =====
Enter employee ID: 7
No Input
>>> |
```

- If input null



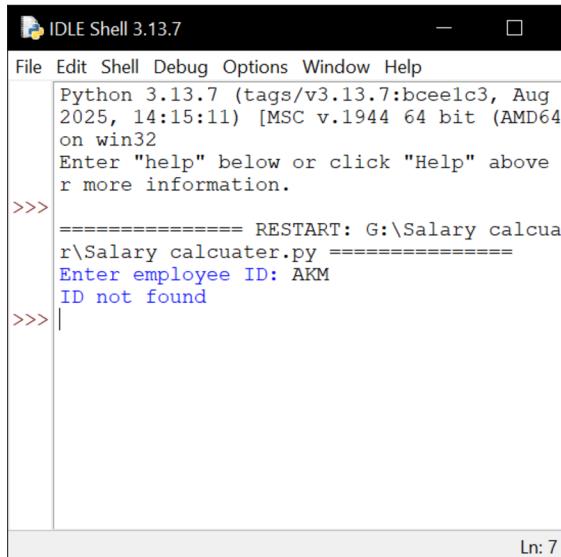
```
E Shell 3.13.7
File Shell Debug Options Window Help
Python 3.13.7 (tags/v3.13.7:bceelc3, Aug 14 2025, 14:15:11) [MSC v.1944 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.

===== RESTART: G:\Salary calcuater\Salary calculator.py =====
Enter employee ID:
D not found
>>> |
```



# OUTPUT

- If input is something else



```
IDLE Shell 3.13.7
File Edit Shell Debug Options Window Help
Python 3.13.7 (tags/v3.13.7:bceelc3, Aug
2025, 14:15:11) [MSC v.1944 64 bit (AMD64)
on win32
Enter "help" below or click "Help" above
for more information.

>>> ===== RESTART: G:\Salary calcuator.py =====
Enter employee ID: AKM
ID not found
>>>
```

Ln: 7

# Result

The program successfully fetches employee details from the database and calculates HRA, DA, TA, and Gross Salary accurately.

You can go to this link to clone this code:-

<https://github.com/Ayush2003gn/Salary-calculator>