

1. Initialize two dimensional array of 3×3. Perform following operations
  - Find the sum of each row
  - Find the sum of each column
  - Find the sum of each element
  - Display output of each operations.
  - Find the row and column number having largest sum.
2. Write a program to calculate overtime pay of 10 employees. Overtime is paid at the rate of Rs. 12.00 per hour for every hour worked above 40 hours. Assume that employees do not work for fractional part of an hour.
3. Food Corporation needs a program to calculate how much to pay their hourly employees. The Department of Labour requires that employees get paid time and a half for any hours over 40 that they work in a single week. For example, if an employee works 45 hours, they get 5 hours of overtime, at 1.5 times their base pay. The hourly employees must be paid at least RS 80.00 an hour. Food Corp requires that an employee not work more than 60 hours in a week.

#### Summary of Rules

- An employee gets paid (hours worked) × (base pay), for each hour up to 40 hours.
  - For every hour over 40, they get overtime = (base pay) × 1.5.
  - The base pay must not be less than the minimum wage (Rs 80.00 an hour). If it is, print an error.
  - If the number of hours is greater than 60, print an error message.
4. Create a new class called FoodCorporation. Write a method that takes the base pay and hours worked as parameters, and prints the total pay or an error. Write a main method that calls this method for each of following employees:

	Base Pay	Hours Worked
Employee 1	Rs7.50	35
Employee 2	Rs 8.20	47
Employee 3	Rs10.00	73

5. A group of VIT friends decide to run the Bhopal Marathon. Their names and times (in minutes) are below:

Name	Time (minutes)
Amit	341
Vikas	273
Anil	278
Kamlesh	329

Suhani	445
Kavita	402
Jalaj	388

**Problem:**

- Find the fastest runner. Print the name and his/her time (in minutes).
  - Find the second fastest runner. Print the name and his/her time (in minutes).
6. The libraries of SmallTownX need a new electronic rental system, and it is up to you to build it. SmallTownX has two libraries. Each library offers many books to rent. Customers can print the list of available books, borrow, and return books.

Define two classes, Book and Library, that provide the functionality for the book database.