

Q1: A teacher needs to track the grades of 25 students. Write a Python program that:

1. Creates a list to store the grades.
2. Populates the list with random grades between 0 and 100.
3. Calculates and prints the average grade.
4. Finds and prints the highest and lowest grades.
5. Sorts the grades in ascending order and prints the top 5 highest scores.

Q2: You are building a simple e-commerce application. Create a Python program that:

6. Creates a list to store product prices.
7. Simulates adding products by populating the list with random prices.
8. Simulates removing products by setting their prices to 0.
9. Calculates and prints the total price of items in the cart.
10. Implements a function to find the most expensive and least expensive items.

Q3: Write a Java program to manage a list of employee salaries. The program should:

1. Create an array to store the salaries of 20 employees.
2. Populate the array with random salaries between \$30,000 and \$100,000.
3. Calculate and print the average salary.
4. Find and print the highest and lowest salaries.
5. Sort the salaries in ascending order and print the top 5 highest salaries.

Q4: Implement a Java program for a library system where:

6. You create an array to store the prices of books.
7. Populate the array with random book prices.
8. Simulate removing books by setting their prices to 0.
9. Calculate and print the total value of books in the library.
10. Implement a method to find the most expensive and least expensive book.

Q5: Write a C program to analyze exam scores. The program should:

1. Create an integer array to store scores for 40 students.
2. Populate the array with random scores between 0 and 100.
3. Calculate and print the average score.
4. Find and print the highest and lowest scores.
5. Sort the scores in descending order and print the top 5 scores.

Q6: Create a C program to handle inventory pricing. The program should:

6. Create a float array to store prices of 15 inventory items.
7. Populate the array with random prices.
8. Simulate removing items by setting their prices to 0.
9. Calculate and print the total value of the remaining inventory.
10. Implement a function to find the most and least expensive items.

Q7: Write a C++ program for managing student grades. The program should:

1. Create a vector to store grades for 30 students.
2. Populate the vector with random grades between 0 and 100.
3. Calculate and print the average grade.
4. Find and print the highest and lowest grades.
5. Sort the grades in ascending order and print the top 5 grades.

Q8: Implement a C++ program for managing product prices in a shopping cart. The program should:

6. Create a vector to store product prices.
7. Populate the vector with random prices.
8. Simulate removing products by setting their prices to 0.
9. Calculate and print the total price of items in the cart.
10. Implement a method to find the most expensive and least expensive items in the cart.

Q9: Create a program in Python that:

1. Reads integers from the user and stores them in a list.
2. Computes the average of the list values.
3. Write a function in Java to perform the same computation and print the results.
4. Translate the same functionality to C++ and implement it.

Q10: Implement a function in C++ to find the median of an array of integers. Write equivalent functions in Java and Python to achieve the same task.