Great! Below is the Java implementation of all 8 problems, complete with code and sample output comments.

✅ Problem 1: Student Marks - Total, Average, Grade

```
import java.util.*;

public class StudentMarks {
  public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    int[] marks = new int[5];
    int total = 0;
    double average;
    char grade;

    try {
      for (int i = 0; i < 5; i++) {
        System.out.print("Enter marks for subject " + (i + 1) + ": ");
        marks[i] = sc.nextInt();
        if (marks[i] < 0 || marks[i] > 100) throw new Exception("Invalid mark: " + marks[i]);
        total += marks[i];
      }

      average = total / 5.0;

      if (average >= 90) grade = 'A';
      else if (average >= 80) grade = 'B';
      else if (average >= 70) grade = 'C';
      else if (average >= 60) grade = 'D';
      else grade = 'F';

      System.out.println("Total: " + total);
      System.out.println("Average: " + average);
      System.out.println("Grade: " + grade);
    } catch (Exception e) {
      System.out.println("Error: " + e.getMessage());
    }
  }
}
```

Sample Output:

```
Enter marks for subject 1: 80
Enter marks for subject 2: 90
Enter marks for subject 3: 85
Enter marks for subject 4: 70
Enter marks for subject 5: 75
Total: 400
Average: 80.0
Grade: B
```

✅ Problem 2: Item Billing with Discount

```
import java.util.*;

public class BillingSystem {
  public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);

    System.out.print("Enter item name: ");
    String item = sc.nextLine();
    System.out.print("Enter price: ");
    double price = sc.nextDouble();
    System.out.print("Enter quantity: ");
    int qty = sc.nextInt();

    double total = price * qty;
    double discount = (total > 2000) ? total * 0.1 : 0;
    double finalAmount = total - discount;

    System.out.println("\n----- BILL -----");
    System.out.printf("Item     : %s\n", item);
    System.out.printf("Price    : %.2f\n", price);
    System.out.printf("Quantity  : %d\n", qty);
    System.out.printf("Total    : %.2f\n", total);
    System.out.printf("Discount  : %.2f\n", discount);
    System.out.printf("Payable   : %.2f\n", finalAmount);
  }
}
```

Sample Output:

```
Enter item name: Shoes
Enter price: 1200
Enter quantity: 2

----- BILL -----
Item     : Shoes
Price    : 1200.00
Quantity  : 2
Total    : 2400.00
Discount  : 240.00
Payable   : 2160.00
```

✅ Problem 3: Sentence Word Count and Search

```
import java.util.*;

public class WordCounter {
  public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    System.out.println("Enter a sentence:");
    String sentence = sc.nextLine();
    System.out.println("Enter word to search:");
```

```
    String word = sc.nextLine();

    String[] words = sentence.split(" ");
    int count = words.length;
    int wordCount = 0;

    for (String w : words) {
      if (w.equalsIgnoreCase(word)) wordCount++;
    }

    System.out.println("Total words: " + count);
    System.out.println("Occurrences of \"" + word + "\": " + wordCount);
  }
}
```

Sample Output:

```
Enter a sentence:
Java is simple and Java is powerful
Enter word to search:
Java
Total words: 7
Occurrences of "Java": 2
```

✅ Problem 4: Password Strength Checker

```
public class PasswordChecker {
  public static void main(String[] args) {
    String password = "Strong@123";

    try {
      if (password.length() < 8)
        throw new Exception("Password too short");
      if (!password.matches(".*[A-Z].*"))
        throw new Exception("Missing uppercase letter");
      if (!password.matches(".*[a-z].*"))
        throw new Exception("Missing lowercase letter");
      if (!password.matches(".*\\d.*"))
        throw new Exception("Missing digit");
      if (!password.matches(".*[^a-zA-Z0-9].*"))
        throw new Exception("Missing special character");

      System.out.println("Password is strong.");
    } catch (Exception e) {
      System.out.println("Weak password: " + e.getMessage());
    }
  }
}
```

Sample Output:

```
Password is strong.
```

✅ Problem 5: ATM Simulation

```
import java.util.*;

public class ATM {
  static double balance = 1000;

  public static void deposit(double amt) {
    balance += amt;
    System.out.println("Deposited: " + amt);
  }

  public static void withdraw(double amt) throws Exception {
    if (amt > balance)
      throw new Exception("Insufficient balance");
    balance -= amt;
    System.out.println("Withdrawn: " + amt);
  }

  public static void checkBalance() {
    System.out.println("Current balance: " + balance);
  }

  public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    int choice;
    do {
      System.out.println("\n1.Deposit 2.Withdraw 3.Check Balance 4.Exit");
      choice = sc.nextInt();
      switch (choice) {
        case 1:
          System.out.print("Enter amount: ");
          deposit(sc.nextDouble());
          break;
        case 2:
          System.out.print("Enter amount: ");
          try {
            withdraw(sc.nextDouble());
          } catch (Exception e) {
            System.out.println("Error: " + e.getMessage());
          }
          break;
        case 3:
          checkBalance();
          break;
      }
    } while (choice != 4);
  }
}
```

Sample Output:

```
1.Deposit 2.Withdraw 3.Check Balance 4.Exit
3
Current balance: 1000.0
```

✅ Problem 6: Salary Calculation

```
import java.util.*;

public class SalaryCalculator {
  public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    try {
      System.out.print("Enter basic salary: ");
      double basic = sc.nextDouble();
      if (basic <= 0) throw new Exception("Invalid salary");

      double hra = 0.2 * basic;
      double da = 0.1 * basic;
      double pf = 0.05 * basic;
      double gross = basic + hra + da - pf;

      System.out.println("HRA: " + hra);
      System.out.println("DA: " + da);
      System.out.println("PF: " + pf);
      System.out.println("Gross Salary: " + gross);
    } catch (Exception e) {
      System.out.println("Error: " + e.getMessage());
    }
  }
}
```

Sample Output:

```
Enter basic salary: 10000
HRA: 2000.0
DA: 1000.0
PF: 500.0
Gross Salary: 11500.0
```

✅ Problem 7: Membership Discount

```
import java.util.*;

public class MembershipDiscount {
  public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    System.out.print("Enter total bill: ");
    double bill = sc.nextDouble();
    sc.nextLine(); // flush
    System.out.print("Enter membership type (Silver/Gold/Platinum): ");
    String type = sc.nextLine();

    double discount = 0;
    if (type.equalsIgnoreCase("Silver")) discount = 0.05 * bill;
```

```
    else if (type.equalsIgnoreCase("Gold")) discount = 0.10 * bill;
    else if (type.equalsIgnoreCase("Platinum")) discount = 0.15 * bill;

    double payable = bill - discount;

    System.out.println("Discount: " + discount);
    System.out.println("Amount to Pay: " + payable);
  }
}
```

Sample Output:

```
Enter total bill: 3000
Enter membership type (Silver/Gold/Platinum): Gold
Discount: 300.0
Amount to Pay: 2700.0
```

✅ Problem 8: Product Stock and Value

```
import java.util.*;

public class ProductStock {
  public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    System.out.print("Enter number of products: ");
    int n = sc.nextInt();
    String[] names = new String[n];
    double[] prices = new double[n];
    int[] qty = new int[n];
    double totalValue = 0;

    try {
      for (int i = 0; i < n;

i++) {
sc.nextLine(); // clear buffer
System.out.print("Enter product name: ");
names[i] = sc.nextLine();
System.out.print("Enter price: ");
prices[i] = sc.nextDouble();
System.out.print("Enter quantity: ");
qty[i] = sc.nextInt();
if (qty[i] == 0) throw new Exception(names[i] + " is out of stock!");

        totalValue += prices[i] * qty[i];
      }

      System.out.println("Total stock value: " + totalValue);
    } catch (Exception e) {
      System.out.println("Error: " + e.getMessage());
    }
}
```

}

****Sample Output:****

Enter number of products: 2
Enter product name: Pen
Enter price: 10
Enter quantity: 0
Error: Pen is out of stock!

Let me know if you'd like:
- All of these wrapped in a **single menu-based program**
- Or converted to a GUI/Android version
- Or a downloadable `.java` file of all programs.