

### **Assignment 1: Student Encapsulation**

```
class Student {  
    private int id;  
    private String name;  
  
    public void setId(int id) {  
        this.id = id;  
    }  
  
    public int getId() {  
        return id;  
    }  
  
    public void setName(String name) {  
        this.name = name;  
    }  
  
    public String getName() {  
        return name;  
    }  
}
```

### **Assignment 2: Bank Account**

```
class BankAccount {  
    private int accountNumber;  
    private double balance;  
  
    public void setAccountNumber(int accountNumber) {
```

```
        this.accountNumber = accountNumber;
    }

    public int getAccountNumber() {
        return accountNumber;
    }

    public void setBalance(double balance) {
        if(balance >= 0) {
            this.balance = balance;
        }
    }

    public double getBalance() {
        return balance;
    }
}
```

### **Assignment 3: Employee Salary**

```
class Employee {
    private int empId;
    private double salary;

    public void setEmpId(int empId) {
        this.empId = empId;
    }

    public int getEmpId() {
        return empId;
    }
}
```

```

    }

    public void setSalary(double salary) {
        if(salary > 0) {
            this.salary = salary;
        }
    }

    public void displaySalary() {
        System.out.println(salary);
    }
}

```

#### **Assignment 4: Product Price**

```

class Product {
    private double price;

    public void setPrice(double price) {
        if(price >= 100 && price <= 100000) {
            this.price = price;
        }
    }

    public double getPrice() {
        return price;
    }
}

```

#### **Assignment 5: Login Credentials**

```
class User {  
    private String email;  
    private String password;  
  
    public void setEmail(String email) {  
        this.email = email;  
    }  
  
    public String getEmail() {  
        return email;  
    }  
  
    public void setPassword(String password) {  
        if(password.length() >= 8) {  
            this.password = password;  
        }  
    }  
}
```

### **Assignment 6: Customer Profile**

```
class Customer {  
    private String name;  
    private int age;  
  
    public void setName(String name) {  
        this.name = name;  
    }  
  
    public void setAge(int age) {
```

```
        if(age >= 18) {  
            this.age = age;  
        }  
    }  
  
    public String getCustomerDetails() {  
        return name + " " + age;  
    }  
}
```

### **Assignment 7: Mobile Phone**

```
class Mobile {  
    private String brand;  
    private double price;  
  
    public void setBrand(String brand) {  
        this.brand = brand;  
    }  
  
    public void setPrice(double price) {  
        this.price = price;  
    }  
  
    public double getPriceWithGST() {  
        return price + (price * 0.18);  
    }  
}
```

### **Assignment 8: ATM System**

```

class ATMAccount {
    private int pin;
    private double balance;

    public void setPin(int pin) {
        if(pin >= 1000 && pin <= 9999) {
            this.pin = pin;
        }
    }

    public void setBalance(double balance) {
        this.balance = balance;
    }

    public void withdraw(double amount) {
        if(amount <= balance) {
            balance -= amount;
        }
    }
}

```

### **Assignment 9: College Admission**

```

class Admission {
    private int marks;
    private String grade;

    public void setMarks(int marks) {
        this.marks = marks;
        assignGrade();
    }
}

```

```

    }

    private void assignGrade() {
        if(marks >= 80) grade = "A";
        else if(marks >= 60) grade = "B";
        else if(marks >= 40) grade = "C";
        else grade = "Fail";
    }

    public String getGrade() {
        return grade;
    }
}

```

### **Assignment 10: Insurance Policy**

```

class Policy {
    private int policyId;
    private double premium;

    public void setPolicyId(int policyId) {
        this.policyId = policyId;
    }

    public void calculatePremium(int age) {
        if(age < 25) premium = 5000;
        else if(age <= 40) premium = 4000;
        else premium = 3000;
    }
}

```

```
public double getPremium() {  
    return premium;  
}  
}
```