

NAME: MUHAMMAD MASOOD KHAM

REG: FA21-BSE-028

## BUS ATTENDANCE SYSTEM

```
public class BusManagement {

    private Passenger[] passengers = new Passenger[5];
    private int numPassengers = 0;

    public static void main(String[] args) {
        BusManagement busManagement = new BusManagement();

        System.out.println("-----UNIVERSITY BUS MANAGEMENT-----\n");

        busManagement.addPassenger("irfan", 12);
        busManagement.addPassenger("karar", 6);
        busManagement.addPassenger("Neelab", 3);
        busManagement.addPassenger("ijlal", 5);

        busManagement.addPassenger("", 2);

        busManagement.addPassenger("Ahmed", -1);

        busManagement.addPassenger("Aisha", 3);
        busManagement.addPassenger("Ali", 1);
    }

    private void addPassenger(String name, int id) {
        if (numPassengers >= 5) {
            System.out.println("Bus is full. Cannot add more passengers.");
            return;
        }

        if (name == null || name.isEmpty()) {
            System.out.println("Error: Invalid name.");
            return;
        }

        if (id <= 0) {
            System.out.println("Error: Invalid ID.");
            return;
        }

        for (int i = 0; i < 5
            ; i++) {
            if (passengers[i].id == id) {
                System.out.println("Error: Duplicate ID.");
            }
        }
    }
}
```

```
        return;
    }
}

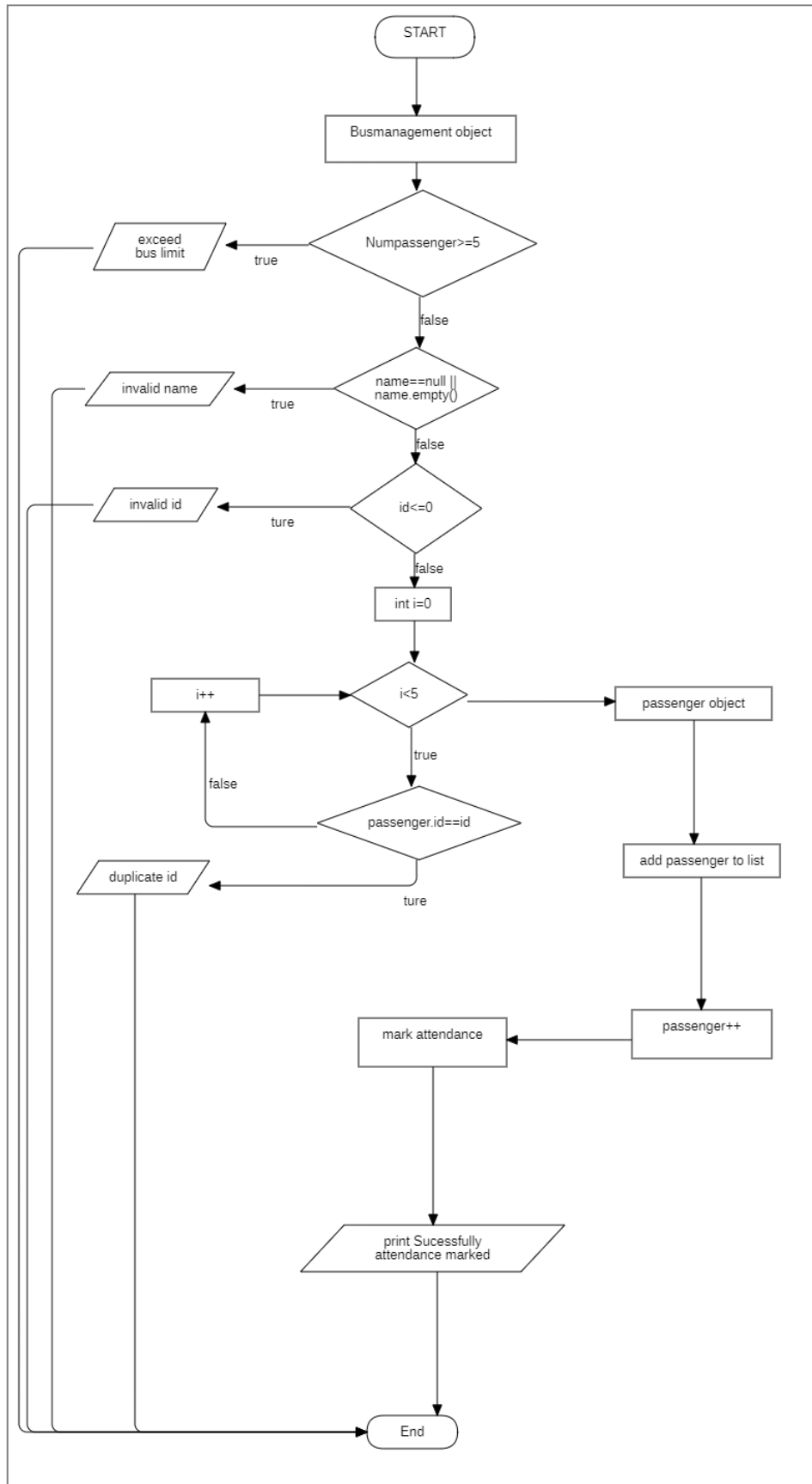
    Passenger passenger = new Passenger(name, id);
    passengers[numPassengers] = passenger;
    numPassengers++;
    passenger.markAttendance();
    System.out.println("Passenger added. Attendance marked for " + name + " with id " + id);
}

private class Passenger {
    String name;
    int id;
    boolean attended;

    public Passenger(String name, int id) {
        this.name = name;
        this.id = id;
        this.attended = false;
    }

    public void markAttendance() {
        this.attended = true;
    }
}
}
```

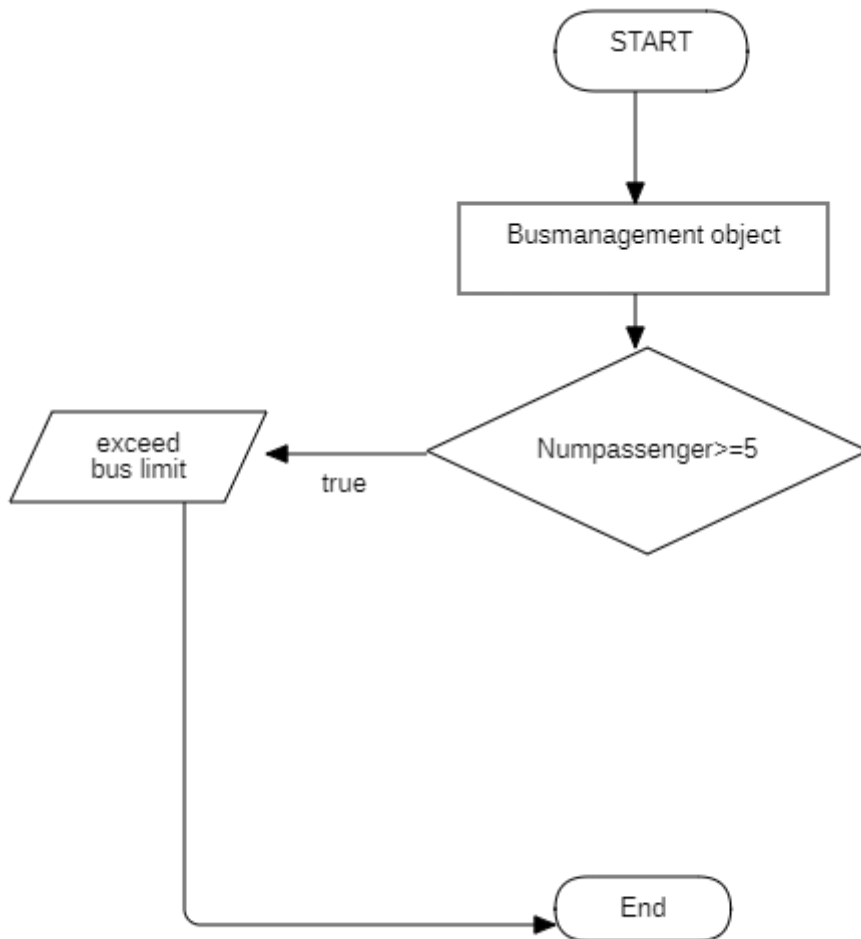
## FLOW CHART:



PATH 1:

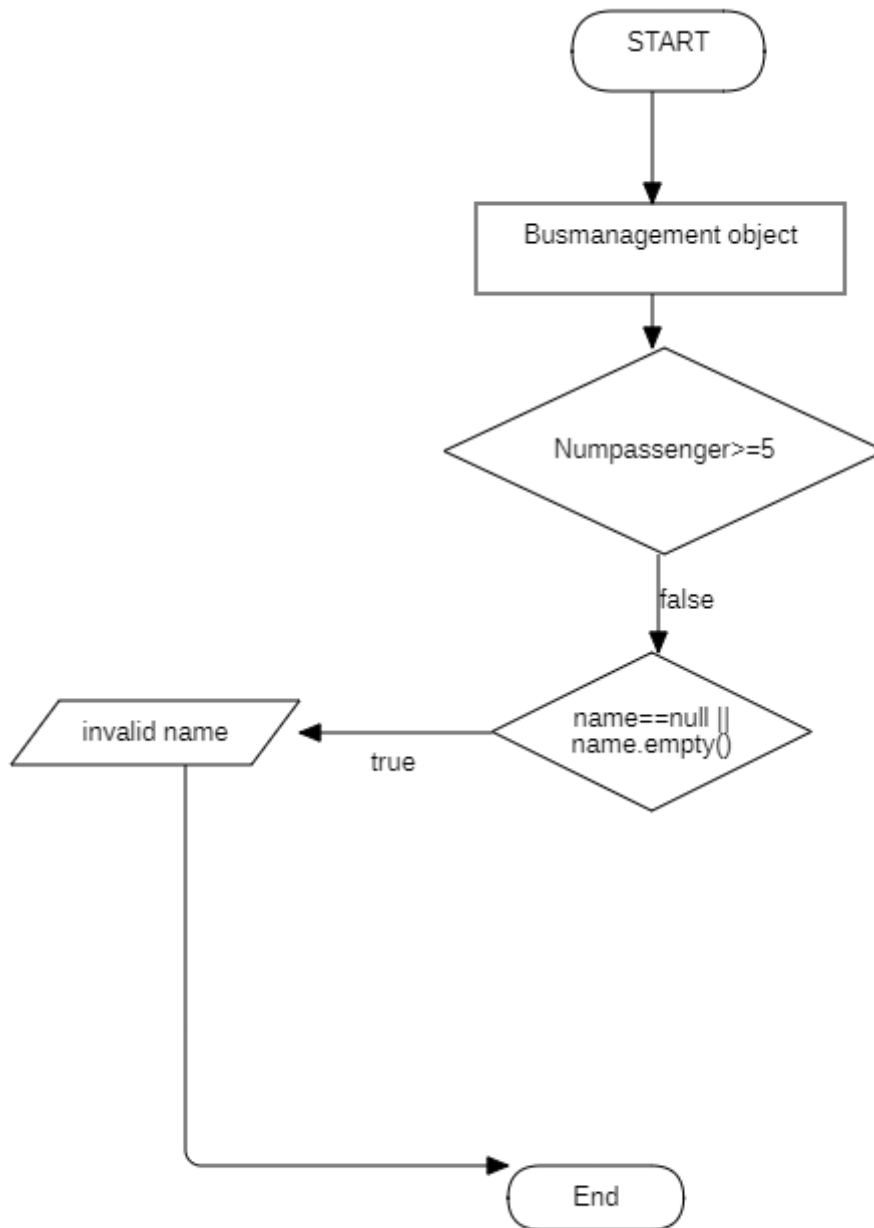
Input Values:

```
busManagement.addPassenger("irfan", 12);  
busManagement.addPassenger("karar", 6);  
busManagement.addPassenger("Neelab", 3);  
busManagement.addPassenger("ijlal", 5);  
busManagement.addPassenger("Ali", 1);  
busManagement.addPassenger("uzair", 10);
```



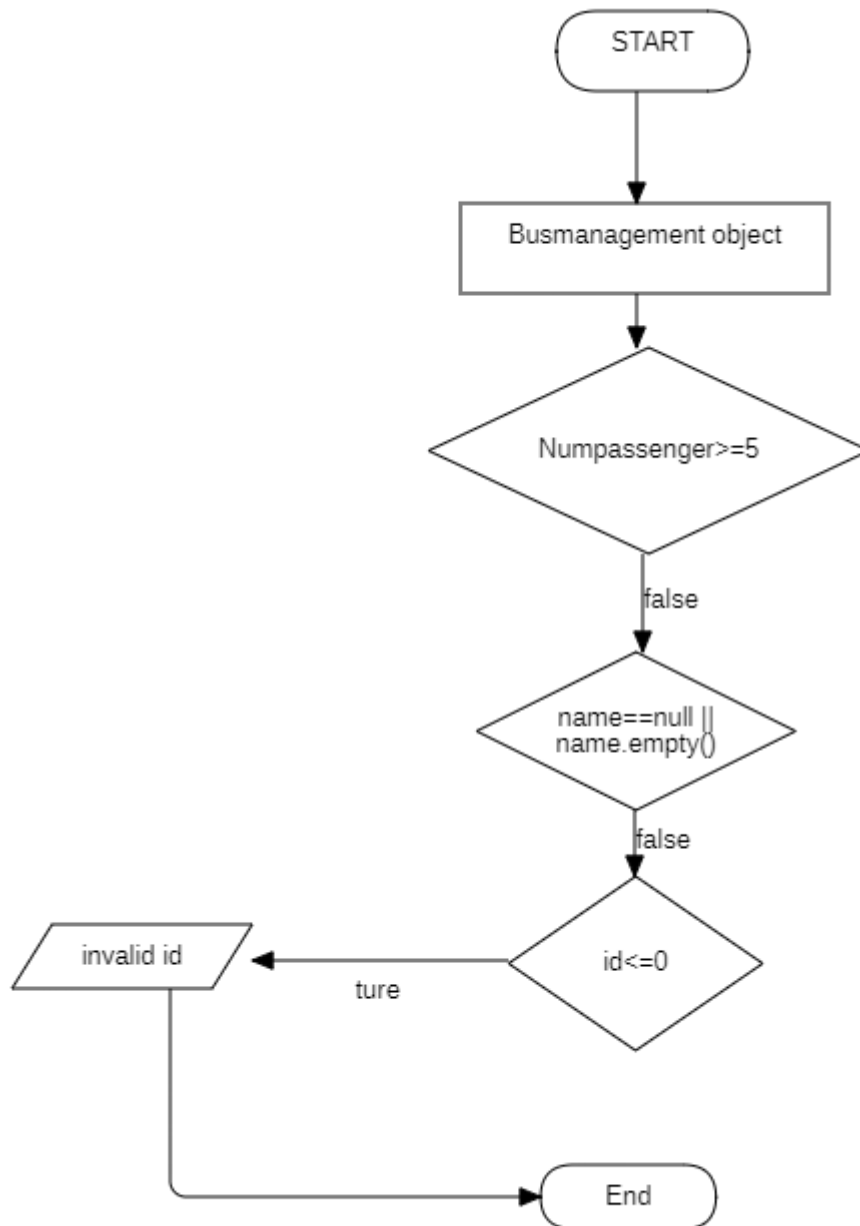
PATH 2:

Input values: busManagement.addPassenger("", 2);



PATH 3:

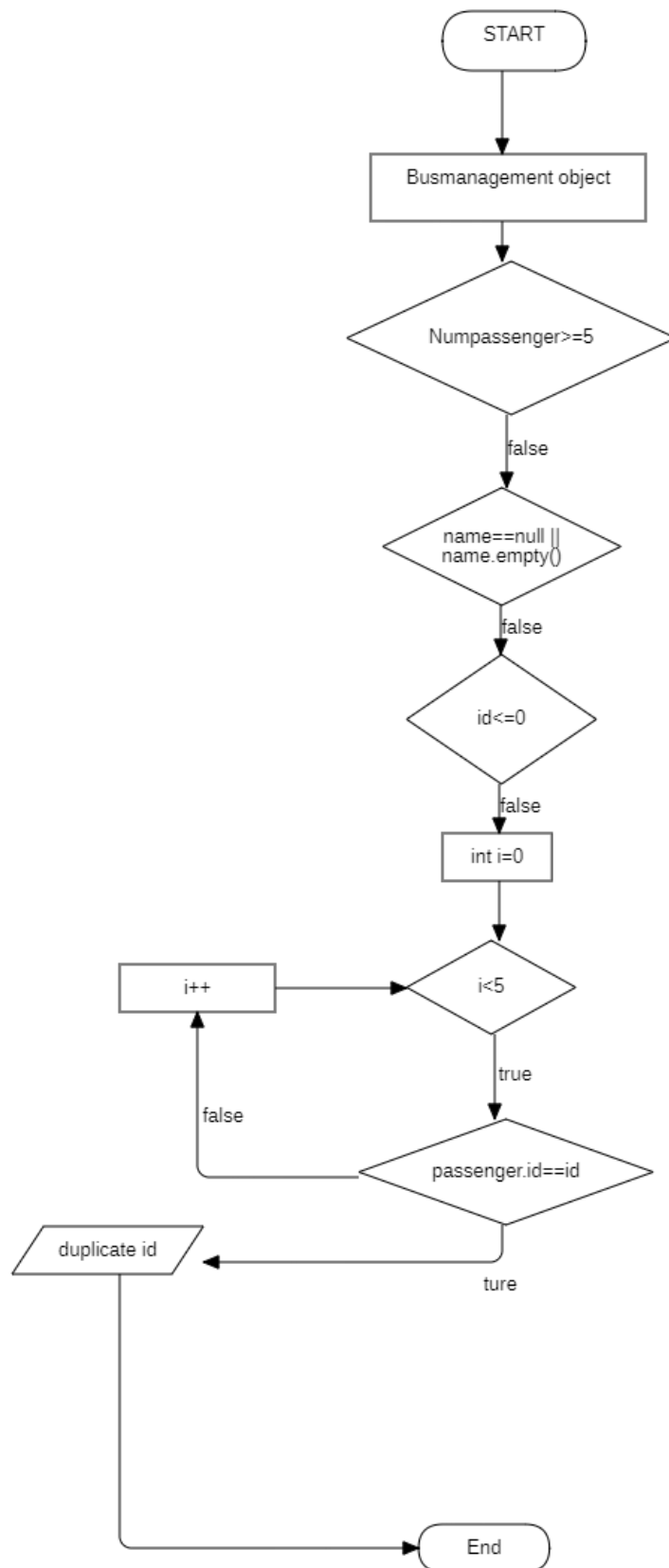
Input Values: busManagement.addPassenger("Ahmed", -1);



PATH 4:

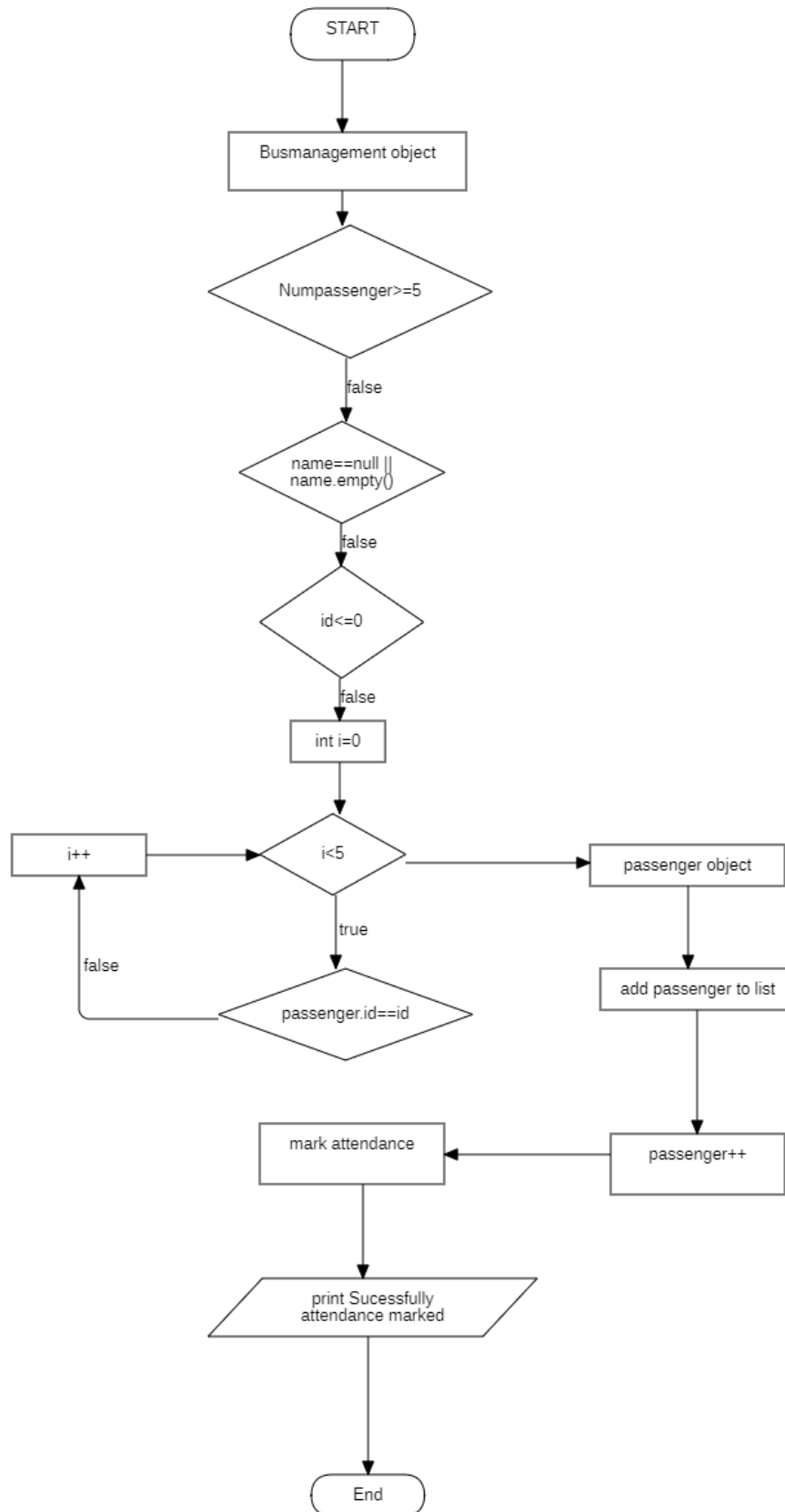
```
busManagement.addPassenger("Ali", 1);
```

```
busManagement.addPassenger("uzair", 1);
```



PATH 5:

busManagement.addPassenger("ijlal", 5)





OUTPUT:

```
Output - busManagement (run) ×
run:
-----UNIVERSITY BUS MANAGEMENT-----
Passenger added. Attendance marked for irfan with id 12
Passenger added. Attendance marked for karar with id 6
Passenger added. Attendance marked for Neelab with id 3
Passenger added. Attendance marked for ijlal with id 5
Error: Invalid name.
Error: Invalid ID.
Error: Duplicate ID.
Passenger added. Attendance marked for Ali with id 1
Bus is full. Cannot add more passengers.
BUILD SUCCESSFUL (total time: 0 seconds)
|
```