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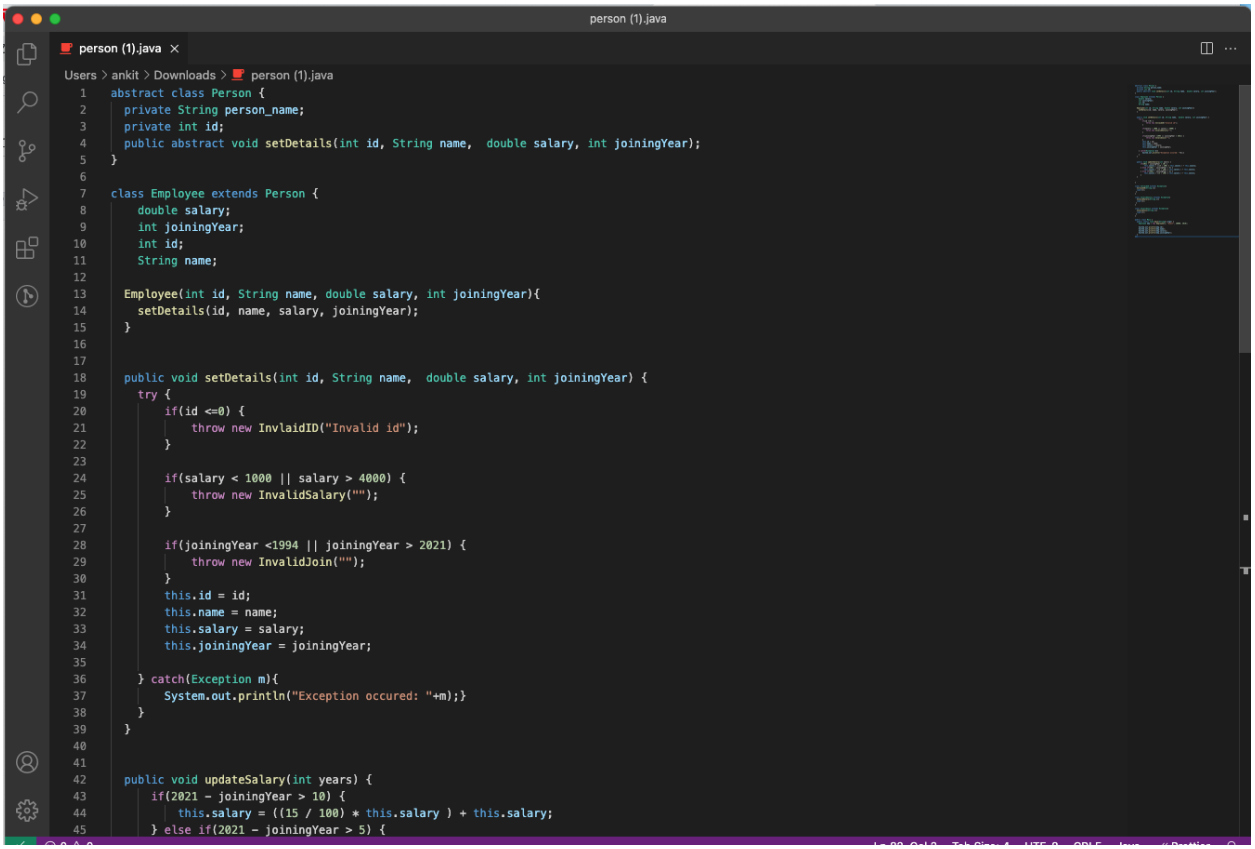
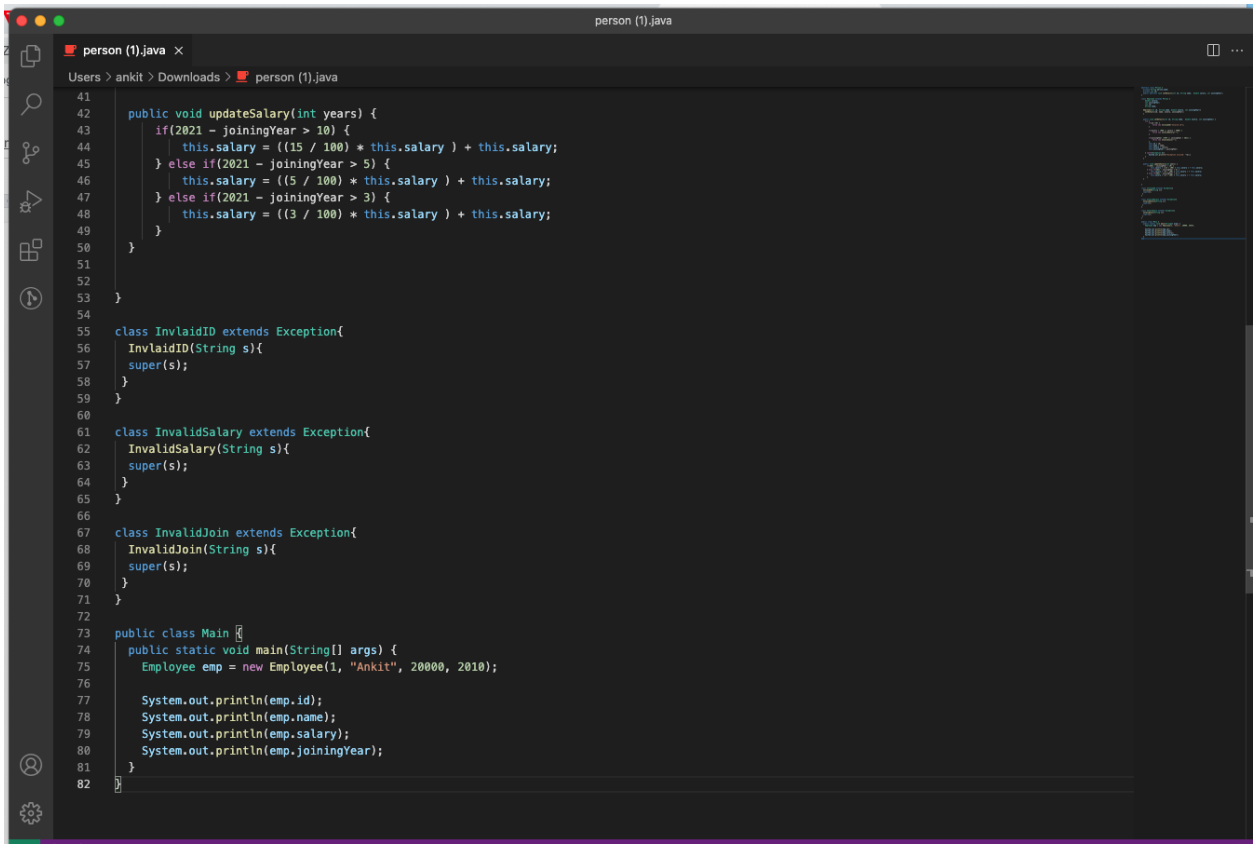
Roll No. 2001031
Std. Id: 20561013

Q2.






```
abstract class Person {
  private String person_name;
  private int id;
  public abstract void setDetails(int id, String name,  double salary, int joiningYear);
}

class Employee extends Person {
    double salary;
    int joiningYear;
    int id;
    String name;

  Employee(int id, String name, double salary, int joiningYear){
    setDetails(id, name, salary, joiningYear);
  }


  public void setDetails(int id, String name,  double salary, int joiningYear) {
    try {
        if(id <=0) {
            throw new InvlaidID("Invalid id");
```

```
        }

        if(salary < 1000 || salary > 4000) {
            throw new InvalidSalary("");
        }

        if(joiningYear <1994 || joiningYear > 2021) {
            throw new InvalidJoin("");
        }
        this.id = id;
        this.name = name;
        this.salary = salary;
        this.joiningYear = joiningYear;

    } catch(Exception m){
        System.out.println("Exception occured: "+m);}
    }
  }


  public void updateSalary(int years) {
      if(2021 - joiningYear > 10) {
          this.salary = ((15 / 100) * this.salary ) + this.salary;
      } else if(2021 - joiningYear > 5) {
          this.salary = ((5 / 100) * this.salary ) + this.salary;
      } else if(2021 - joiningYear > 3) {
          this.salary = ((3 / 100) * this.salary ) + this.salary;
      }
  }


}

class InvlaidID extends Exception{
  InvlaidID(String s){
  super(s);
 }
}

class InvalidSalary extends Exception{
  InvalidSalary(String s){
  super(s);
 }
}
```

```
class InvalidJoin extends Exception{
  InvalidJoin(String s){
  super(s);
 }
}

public class Main {
  public static void main(String[] args) {
    Employee emp = new Employee(1, "Ankit", 20000, 2010);

    System.out.println(emp.id);
    System.out.println(emp.name);
    System.out.println(emp.salary);
    System.out.println(emp.joiningYear);
  }
}
```