

**E.B.SUWATHI [15L247]**

**ECE-B**

**JAVA ASSIGNMENT DAY2**

```
import java.util.*;

public class Matrix {

    public static void main(String[] args){

        int i,j,t,k,round;

        float d;

        int standardDeviation[][]={{4,-3,2},{-3,16,3},{2,3,25}};

        int corelation[][]={{0,0,0},{0,0,0},{0,0,0}};

        int temp[][]={{0,0,0},{0,0,0},{0,0,0}};

        int covariant[][]={{0,0,0},{0,0,0},{0,0,0}};

        for(i=0;i<3;i++) {

            for(j=0;j<3;j++){

                if(i==j) {

                    t=(int) Math.sqrt(standardDeviation[i][i]);

                    d=(float)1/t;

                    round=Math.round(d);

                    corelation[i][j]=round;

                }

            }

        }

    }

}
```

```

        System.out.println("\n after inverse");

        for(i=0;i<3;i++){
            for(j=0;j<3;j++){
                System.out.print(corelation[i][j]+"t");
            }
            System.out.println("\n");
        }

        for(i=0;i<3;i++){
            for(j=0;j<3;j++){
                for(k=0;k<3;k++){
                    temp[i][j]=temp[i][j]+corelation[i][k]*standardDeviation[k][j];
                }
            }
        }

        for(i=0;i<3;i++){
            for(j=0;j<3;j++){
                for(k=0;k<3;k++){
                    covariant[i][j]=covariant[i][j]+corelation[i][k]*temp[k][j];
                }
            }
        }

        System.out.println("*****covariance matrix*****");

        for(i=0;i<3;i++){
            for(j=0;j<3;j++){
                System.out.print(covariant[i][j]+"t");
            }
            System.out.println("\n");
        }
    }
}

```

## Output:

```
C:\Users\students\Desktop>javac Matrix.java
```

```
C:\Users\students\Desktop>java Matrix
```

```
*****covariance matrix*****
```

```
4      -3      2
```

```
0      0      0
```

```
0      0      0
```

```
C:\Users\students\Desktop>
```