1. Java program to print all prime numbers in given array.

```
import java.util.*;

class Prime() {
    public static void main(String[] argv) {
    int n;
    Scanner scanner = new Scanner(System.in);
    System.out.println("Enter no. of elements in array")
    n = scanner.nextInt();
    int arr[] = new int[n];
    for(int i=0; i<n; i++) {
        arr[i] = scanner.nextInt();
    }

    for(int i=0; i<n; i++) {
        if(checkPrime(arr[i])) {
            System.out.print(arr[i]);
        }
    }
}

public boolean checkPrime(int num) {

    if(num == 0 || num == 1) {
        return false;
    } else {
        for(int i=2; i<num/2; i++) {
            if(num % i == 0) {
                return false;
            }
        }
    return true
}
```

2. Java program to multiply two given matrices and print the result in matrix form.

```
import java.util.Scanner;
class MultipyMatrix {
    public static void main (String[] argv) {
        int m, n, p, q, sum=0, c, j, k;

        Scanner s = new Scanner (System.in);
        System.out.print("Enter dimension of matrix m, n ");
        m = s.nextInt();
        n = s.nextInt();

        System.out.print("\n Enter dimension of second matrix p, q");
        p = s.nextInt();
        q = s.nextInt();

        if (n != p) {
            System.out.println(" Matrix cannot be multiplied
                                n != q " );
        } else {
            int[][] f, s, m;
            f = new int[m][n];
            s = new int [p][q];
            m = new int [m][q];
            System.out.println("Enter first matrix");
            for (i=0; i<m; i++)
                for (j=0; j<n; j++)
                f[i][j] = s.nextInt();
            System.out.println(" Enter second matrix ");
            for (j=0; i<p; i++)
                for (j=0; j<q; j++)
                    s[i][j] = s.nextInt();

            for (i=0; i<m; i++) {
                for (j=0; j<q; j++) {
                    for (k=0; k<p; k++) {
                        sum += f[i][k] * s[k][j]
```

```
            }
            m[i][j] = sum;
            sum = 0;
        }
    }
    System.out.println("Result matrix is :");
    for(j=0; j<m; i++){
        for(j=0; j<q; j++){
            System.out.print(m[i][j] + "\t");
        }
        System.out.println("\n");
    }
}
```

3. Java class to create queue with methods and delete. Use Constructor.

a.

```
public class Queue {
    int[] q; int top = -1; int length;
    Queue(int length) {
        this.q = new int[length];
        this.length = length;
    }
    public addQueue(int element){
        if(top < length){
            top++;
            q[top] = element;
        } else {
            System.out.println("Error: Queue overflow");
        }
    }
```

```
public int deleteQueue() {
    if (top == -1) {
        System.out.println("Error: No elements in queue");
        return -1;
    } else if (top < length) {
        int element = q[top];
        top++;
        if (top == length) {
            top = 0;
        }
        return element;
    }
}
}
```