

1.COMPOSITE NUMBERS

```
import java.util.Scanner;

import java.io.*;

public class CNC
{
    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter the size of the array: ");

        int size = scanner.nextInt();

        int[] numbers = new int[size];

        System.out.println("Enter the elements of the array:");

        for (int i = 0; i < size; i++) {

            numbers[i] = scanner.nextInt();

        }

        int count = 0;

        for (int number : numbers) {

            if (isComposite(number)) {

                count++;

            }

        }

        System.out.println("The number of composite numbers in the array is: " + count);

    }

    private static boolean isComposite(int number) {

        if (number <= 1) {

            return false;

        }

        for (int i = 2; i <= Math.sqrt(number); i++) {

            if (number % i == 0) {

                return true;

            }

        }

    }

}
```

```

    }

    return false;

}

}

```

The screenshot shows a Windows PowerShell terminal window with the following content:

```

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PS C:\Users\manoh> cd D:\javamk
PS D:\javamk> javac CNC.java
PS D:\javamk> java CNC
Enter the size of the array: 7
Enter the elements of the array:
16 18 27 16 23 21 19
The number of composite numbers in the array is: 5
PS D:\javamk> |

```

2.MATRIX ADDITION

```

import java.util.*;

import java.io.*;

class addmatrix

{

public static void main(String args[])

{

Scanner sc=new Scanner(System.in);

int i,j,row,col;

System.out.println("enter the number of rows");

row=sc.nextInt();

System.out.println("enter the number of col");

col=sc.nextInt();

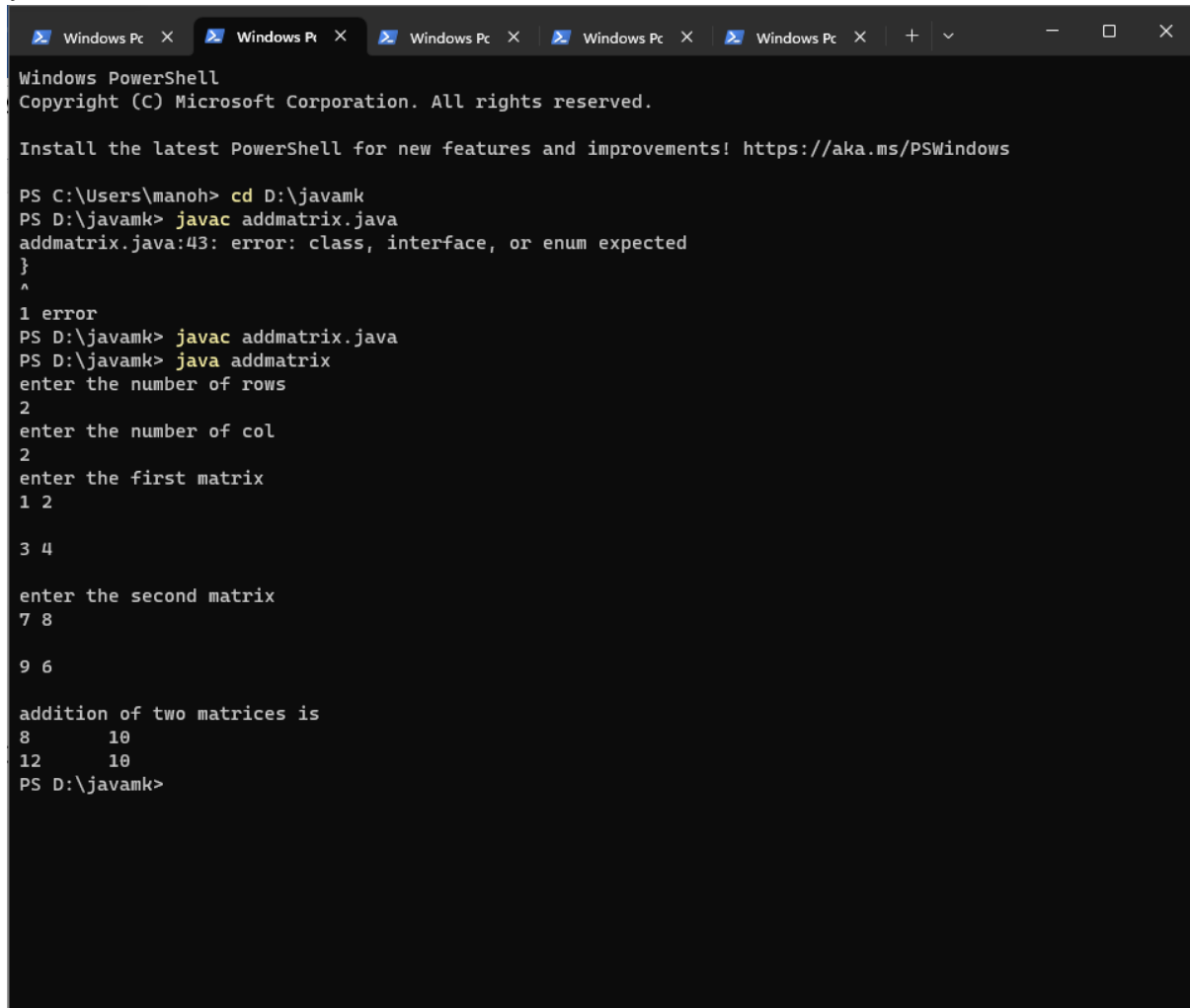
int max1[][]=new int[row][col];

```

```
int max2[][]=new int[row][col];
int add[][]=new int[row][col];
System.out.println("enter the first matrix");
for(i=0;i<row;i++)
{
for(j=0;j<col;j++)
max1[i][j]=sc.nextInt();
System.out.println();
}
System.out.println("enter the second matrix");
for(i=0;i<row;i++)
{
for(j=0;j<col;j++)
max2[i][j]=sc.nextInt();
System.out.println();
}
for(i=0;i<row;i++)
for(j=0;j<col;j++)
add[i][j]=max1[i][j]+max2[i][j];
System.out.println("addition of two matrices is");
for(i=0;i<row;i++)
{
for(j=0;j<col;j++)
System.out.print(add[i][j]+"\\t");

System.out.println();
}
}
```

}



```
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PS C:\Users\manoh> cd D:\javamk
PS D:\javamk> javac addmatrix.java
addmatrix.java:43: error: class, interface, or enum expected
}
^
1 error
PS D:\javamk> javac addmatrix.java
PS D:\javamk> java addmatrix
enter the number of rows
2
enter the number of col
2
enter the first matrix
1 2

3 4

enter the second matrix
7 8

9 6

addition of two matrices is
8      10
12     10
PS D:\javamk>
```

3.SQUARE ROOT

```
import java.util.Scanner;

public class SquareRoot
{
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter a non-negative integer: ");
        int x = scanner.nextInt();
        int result = sqrt(x);
        System.out.println("The square root of " + x + " is " + result);
    }

    private static int sqrt(int x) {
```

```

    if (x == 0) {
        return 0;
    }
    int left = 1;
    int right = x;
    int result = 0;
    while (left <= right) {
        int mid = left + (right - left) / 2;
        if (mid <= x / mid) {
            left = mid + 1;
            result = mid;
        } else {
            right = mid - 1;
        }
    }
    return result;
}
}

```

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PS C:\Users\manoh> cd D:\javamk
PS D:\javamk> javac SquareRoot.java
PS D:\javamk> java SquareRoot
Enter a non-negative integer: 4
The square root of 4 is 2
PS D:\javamk> |

```

4.PALINDROME

```
import java.util.Scanner;

public class Palindrome {

    public static void main(String[] args) {

        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter an integer: ");

        int x = scanner.nextInt();

        boolean result = isPalindrome(x);

        System.out.println("The integer " + x + " is a palindrome: " + result);

    }

    private static boolean isPalindrome(int x) {

        if (x < 0) {

            return false;

        }

        int original = x;

        int reversed = 0;

        while (x != 0) {

            int digit = x % 10;

            reversed = reversed * 10 + digit;

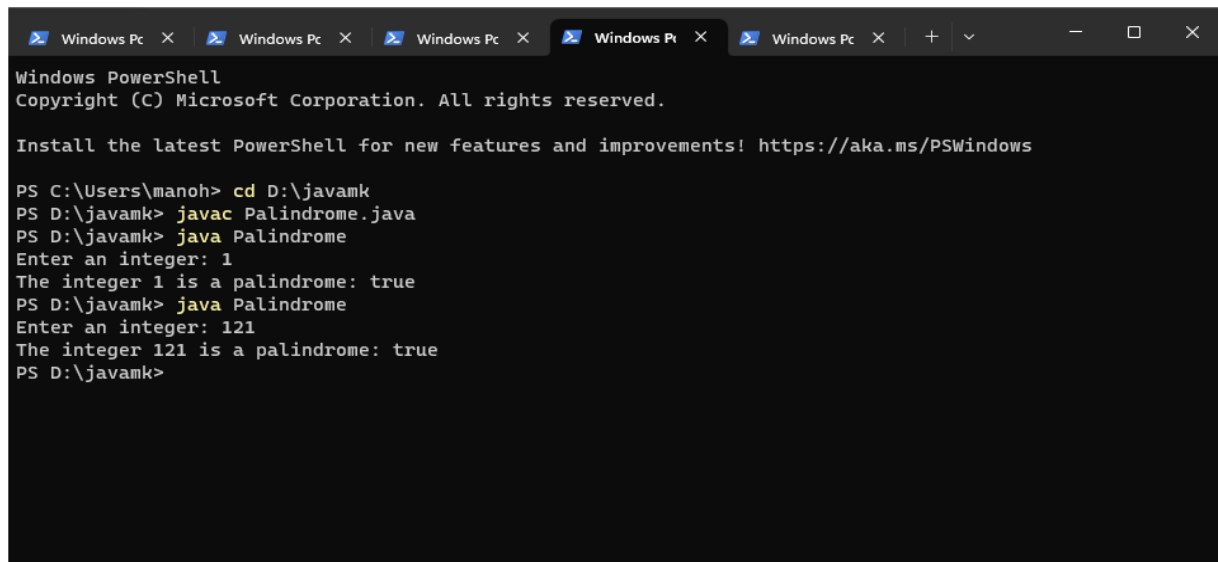
            x /= 10;

        }

        return original == reversed;

    }

}
```



```
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PS C:\Users\manoh> cd D:\javamk
PS D:\javamk> javac Palindrome.java
PS D:\javamk> java Palindrome
Enter an integer: 1
The integer 1 is a palindrome: true
PS D:\javamk> java Palindrome
Enter an integer: 121
The integer 121 is a palindrome: true
PS D:\javamk>
```

5.Find the error and Debug the code

```
import java.util.*;

class age{

public static void main(string arcs[]){

Scanner scan=new scanner (System.in);

System.out.println("Enter the age of person");

int user_age=scan.next Int();

System.out.println("The age of person is"+user_age);

if(user_age>18)

{

System.out.println("You are eligible to Vote");

}

else{

System.out.println("You are not eligible to vote and ..for you " + (18 - user_age)
+ " years
are left to be eligible");

}

}

}
```

Answer

```
import java.util.*;

class Age {

    public static void main(String[] args) {

        Scanner scan = new Scanner(System.in);

        System.out.println("Enter the age of the person:");

        int userAge = scan.nextInt();

        System.out.println("The age of the person is " + userAge);

        if (userAge >= 18) {

            System.out.println("You are eligible to vote.");

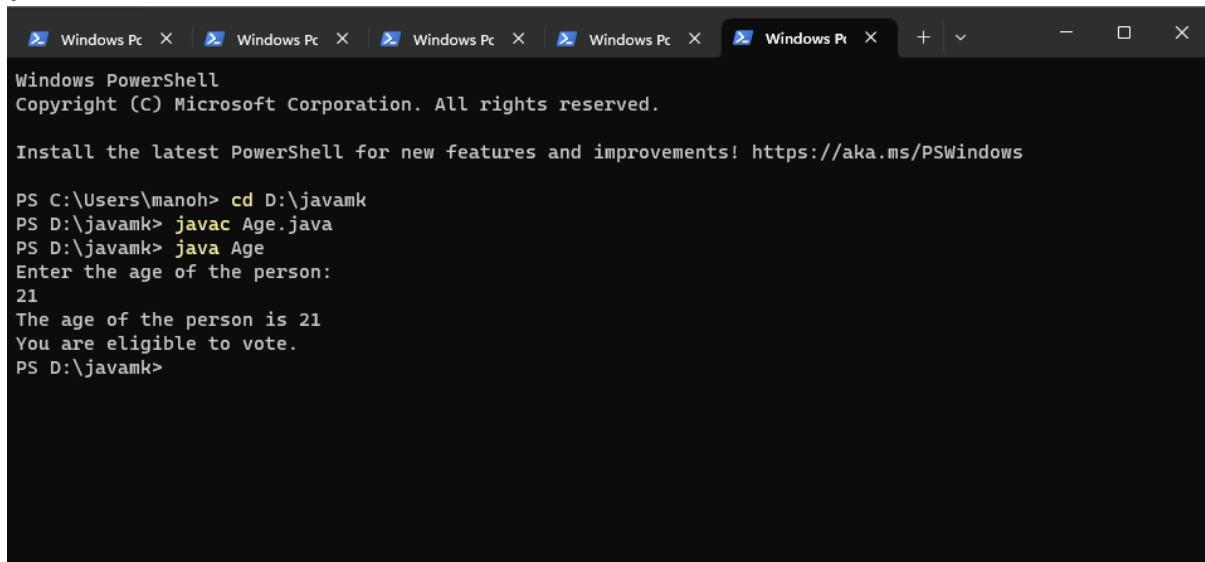
        } else {

            System.out.println("You are not eligible to vote, and " + (18 - userAge)
+ " years are left to be eligible.");

        }

    }

}
```



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PS C:\Users\manoh> cd D:\javamk
PS D:\javamk> javac Age.java
PS D:\javamk> java Age
Enter the age of the person:
21
The age of the person is 21
You are eligible to vote.
PS D:\javamk>
```