

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;
}
}

```

```

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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;
}
}

```

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 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;

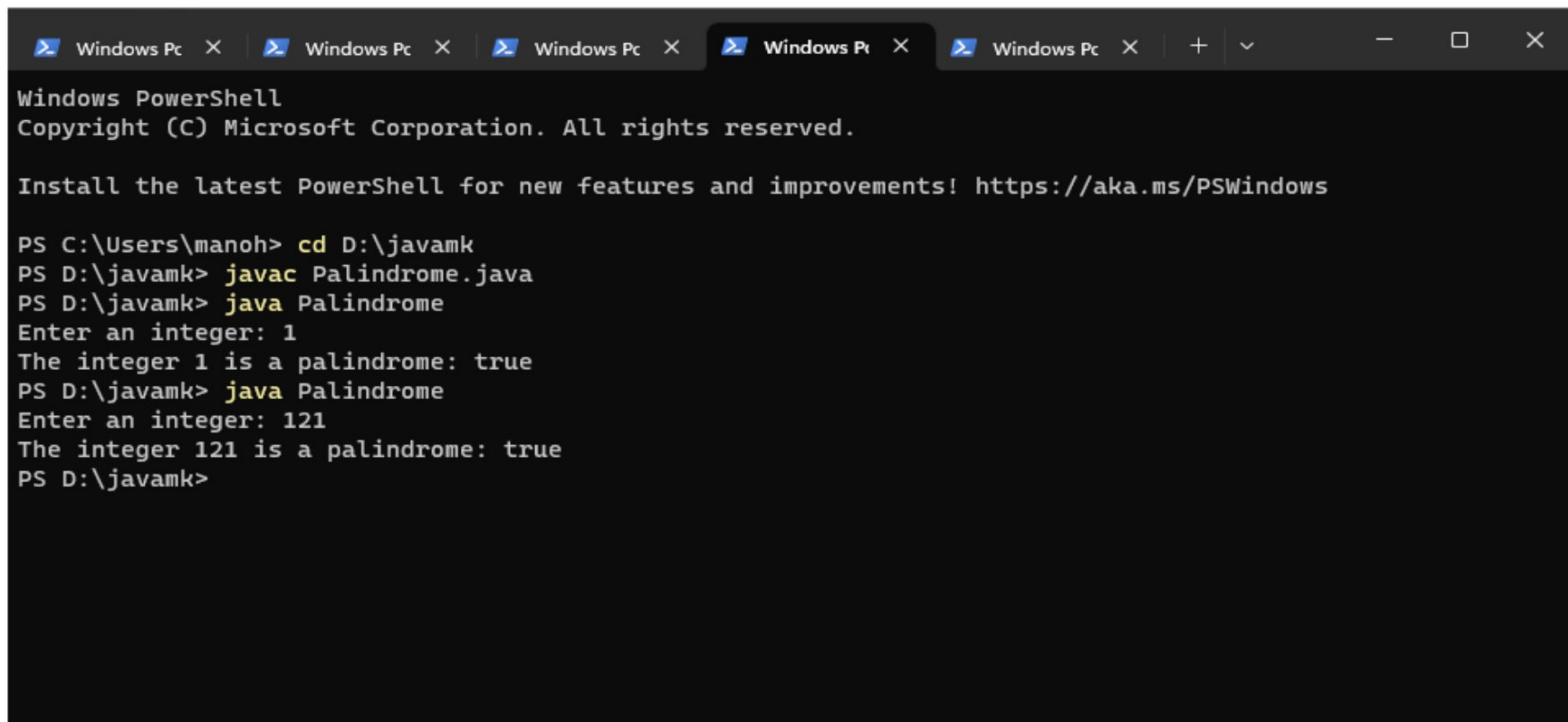
            x /= 10;

        }

        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("&quot;Enter the age of person&quot;);

int user_age=scan.next Int();

System.out.printn("&quot;The age of person is&quot;+user_age);

if(user_age&gt;18)

{

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

}

else{

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

}

}

}
```


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.");

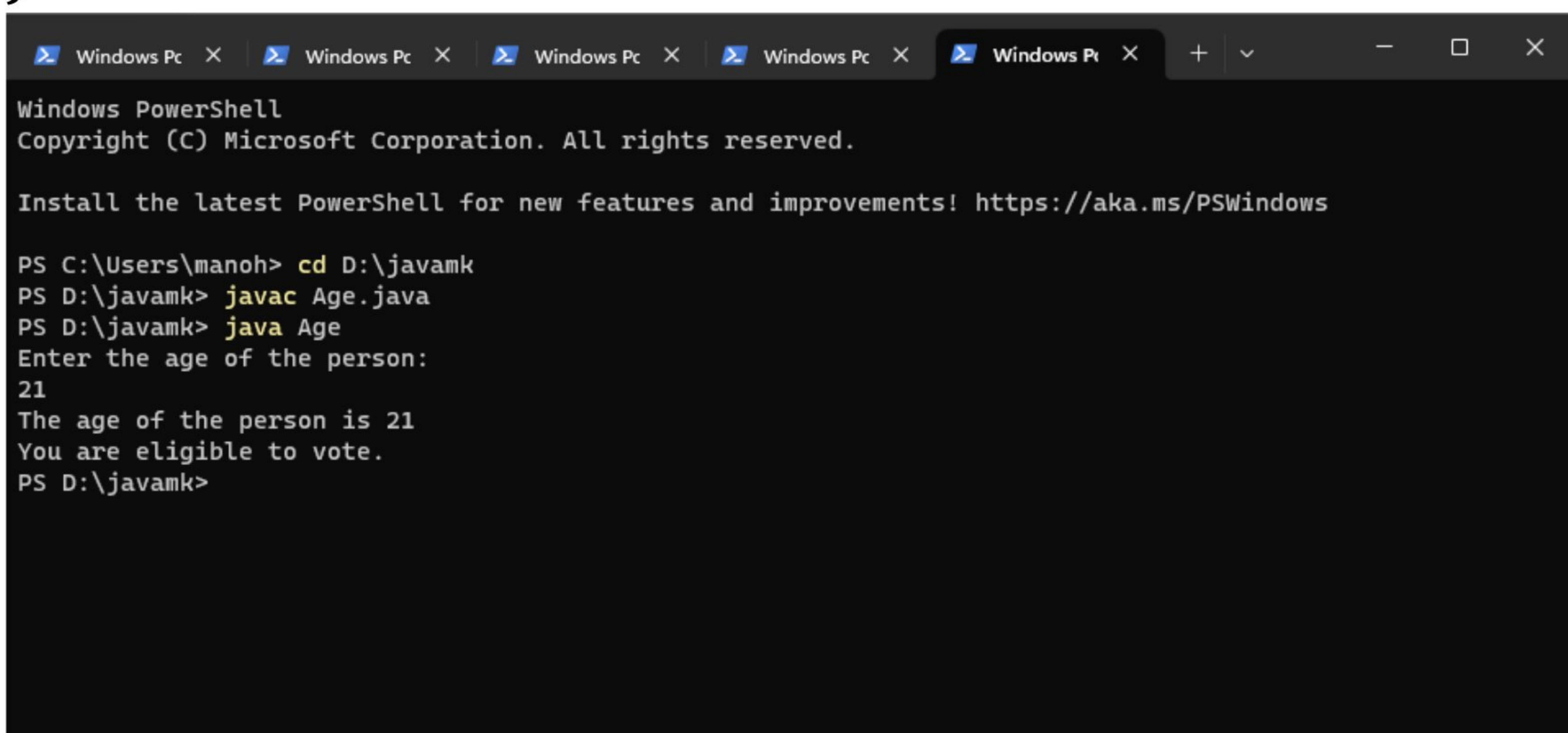
        } else {

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

        }

    }

}
```

A screenshot of a Windows PowerShell terminal window. The window has a title bar with five tabs, each labeled 'Windows Pc'. The terminal content shows the following commands and output: '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.', and 'PS D:\javamk>'. The window also displays the standard PowerShell header: 'Windows PowerShell', 'Copyright (C) Microsoft Corporation. All rights reserved.', and a message about installing the latest PowerShell: 'Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows'.