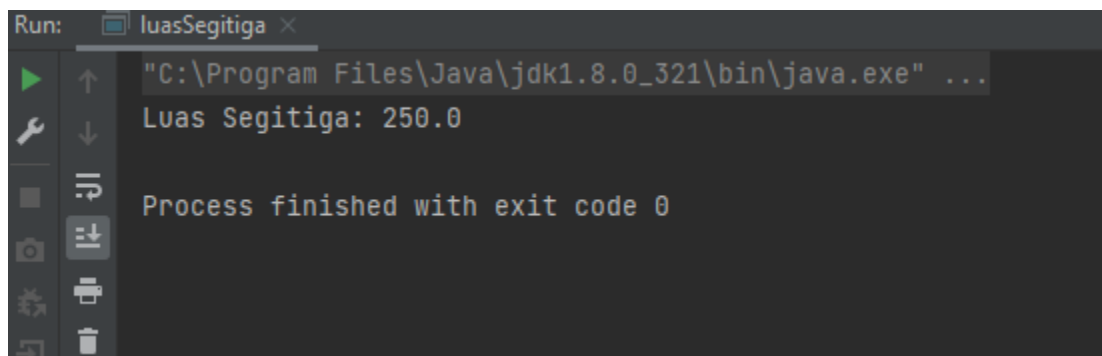


PART A

1. Menghitung Luas Segitiga

Source code

```
public class luasSegitiga {  
    public static void main(String[] args) {  
        // input  
        float alas = 20;  
        float tinggi = 25;  
  
        // luas segitiga  
        float luas;  
        luas = 0.5f * alas * tinggi;  
        System.out.println("Luas Segitiga: " + luas);  
    }  
}
```



2. Konversi Nilai

Source code

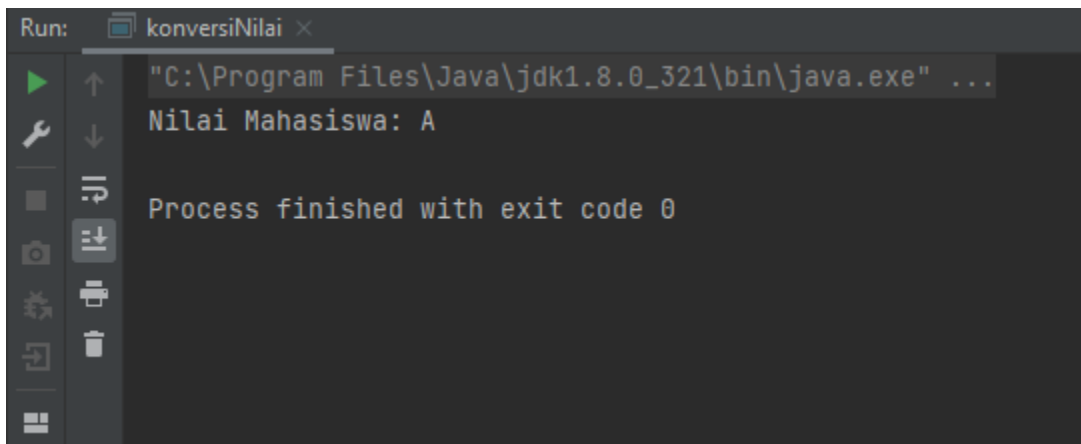
```
public class konversiNilai {  
    public static void main(String[] args) {  
        // input  
        int studentScore = 80;  
  
        // proses konversi  
  
        if(studentScore <= 100 && studentScore >= 80){  
            System.out.println("Nilai Mahasiswa: A");  
        } else if ( studentScore <= 79 && studentScore >= 65){  
            System.out.println("Nilai Mahasiswa: B+");  
        }  
    }  
}
```

```

    } else if ( studentScore <= 64 && studentScore >= 50){
        System.out.println("Nilai Mahasiswa: B");
    } else if ( studentScore <= 49 && studentScore >= 35){
        System.out.println("Nilai Mahasiswa: C");
    } else if ( studentScore <= 34 && studentScore >= 0){
        System.out.println("Nilai Mahasiswa: D");
    } else {
        System.out.println("Nilai Mahasiswa: invalid");
    }

}
}

```



3. Faktor Bilangan

Source code

```

public class faktorBilangan {
    public static void main(String[] args) {
        int bilangan;

        //proses
        bilangan = 20;
        int s;
        for (int i = 1; i <= bilangan; i++){
            s = bilangan % i;
            if (s == 0){
                System.out.println(i);
            }
        }
    }
}

```

```
}  
}
```



Run: faktorBilangan ×

```
"C:\Program Files\Java\jdk1.8.0_321\bin\java.exe" ...  
1  
2  
4  
5  
10
```

Bookmarks Alt+2

Process finished with exit code 0

4. Faktor Bilangan II

Source code

```
public class faktorBilangan2 {  
    public static void main(String[] args) {  
        int bilangan;  
  
        //proses  
        bilangan = 20;  
        int s;  
        for (int i = bilangan; i >= 1; i--){  
            s = bilangan % i;  
            if (s == 0){  
                System.out.println(i);  
            }  
        }  
    }  
}
```



Run: faktorBilangan2 x

"C:\Program Files\Java\jdk1.8.0_321\bin\java.exe" ...

20
10
5
4
2
1

Process finished with exit code 0

5. Bilangan Prima

Source code

```
public class bilanganPrima {  
  
    static boolean primeNumber(int number){  
        boolean hasil;  
        hasil = true;  
        int x = 0;  
        for (int i = 1; i <= number; i++){
```

```

        if (number % i == 0){
            x++;
        }
    }
    if (x==2){
        hasil = true;
    }else {
        hasil = false;
    }
    return hasil;
}

public static void main(String[] args) {
    System.out.println(primeNumber(11)); //true
    System.out.println(primeNumber(13)); //true
    System.out.println(primeNumber(17)); //true
    System.out.println(primeNumber(20)); //true
    System.out.println(primeNumber(35)); //true
}
}

```



Run: bilanganPrima x

```

"C:\Program Files\Java\jdk1.8.0_321\bin\java.exe" ...
true
true
true
false
false
Process finished with exit code 0

```

6. Palingdrome

Source code

```

public class palingdrom {
    private static boolean palingdrome(String value){
        boolean cek = true;
        String teksKebalikan = "";
        int jmlh = value.length();
    }
}

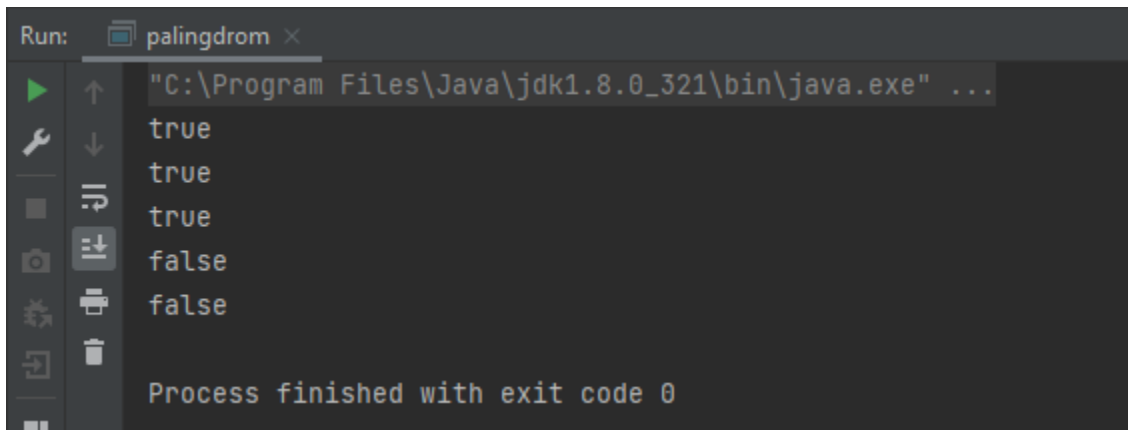
```

```

        for (int i = jmlh - 1; i >= 0; i--){
            teksKebalikan += value.charAt(i);
        }
        if (value.equalsIgnoreCase(teksKebalikan)){
            cek = true;
        }else {
            cek = false;
        }
        return cek;
    }

    public static void main(String[] args) {
        System.out.println(palingdrome("civic"));
        System.out.println(palingdrome("katak"));
        System.out.println(palingdrome("kasur rusak"));
        System.out.println(palingdrome("kupu-kupu"));
        System.out.println(palingdrome("lion"));
    }
}

```



The screenshot shows the 'Run' console of an IDE. The title bar indicates the file 'palingdrom' is open. The command executed is 'C:\Program Files\Java\jdk1.8.0_321\bin\java.exe ...'. The output consists of five lines: 'true', 'true', 'true', 'false', and 'false', corresponding to the words 'civic', 'katak', 'kasur rusak', 'kupu-kupu', and 'lion' respectively. The console concludes with 'Process finished with exit code 0'.

```

Run: palingdrom x
"C:\Program Files\Java\jdk1.8.0_321\bin\java.exe" ...
true
true
true
false
false
Process finished with exit code 0

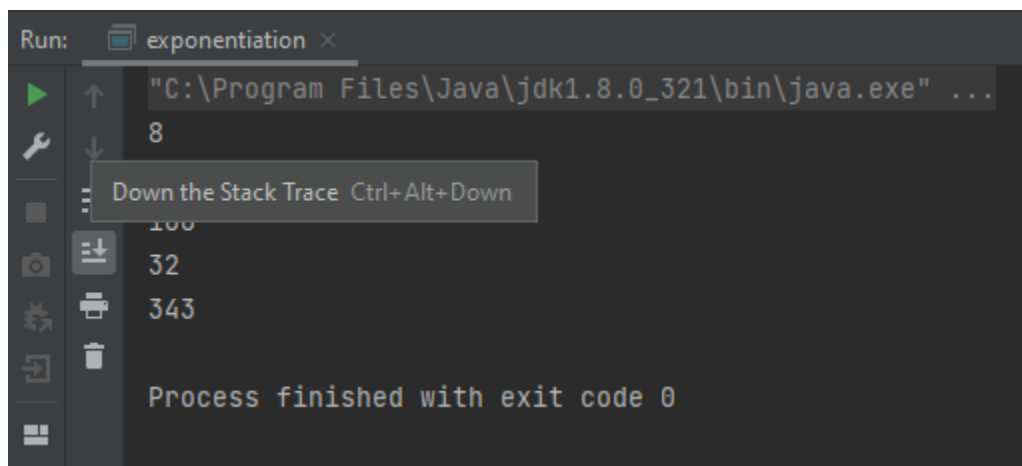
```

PART B

1. Exponentiation

Source code

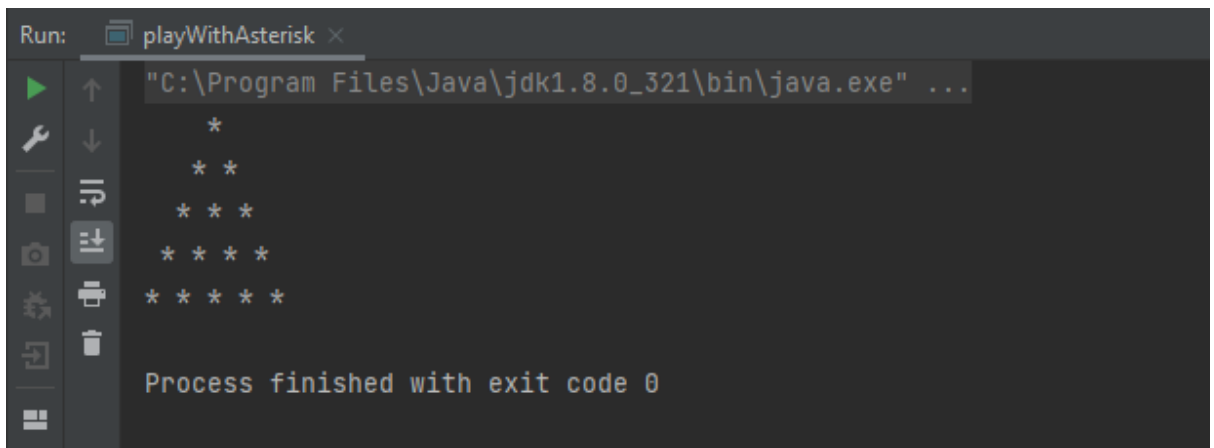
```
public class exponentiation {  
  
    private static int pangkat(int a, int b){  
        int hasil = 1;  
        for(int i = 1; i <= b; i++){  
            hasil = hasil * a;  
        }  
        return hasil;  
    }  
  
    public static void main(String[] args) {  
        System.out.println(pangkat(2, 3)); //8  
        System.out.println(pangkat(5, 3)); //125  
        System.out.println(pangkat(10, 2)); //100  
        System.out.println(pangkat(2, 5)); //32  
        System.out.println(pangkat(7, 3)); //343  
    }  
}
```



2. Play With Arterisk

Source code

```
public class playWithAsterisk {  
  
    private static void bintang(int n){  
        int space = n-1;  
        for (int x = 1; x <= n; x++){  
            for (int y = space; y >=1; y--){  
                System.out.print(" ");  
            }  
            for (int z = 1; z <=x; z++){  
                System.out.print("* ");  
            }  
            System.out.println(" ");  
            space--;  
        }  
    }  
  
    public static void main(String[] args) {  
        bintang(5);  
    }  
}
```



```
Run: playWithAsterisk x  
"C:\Program Files\Java\jdk1.8.0_321\bin\java.exe" ...  
*  
* *  
* * *  
* * * *  
* * * * *  
  
Process finished with exit code 0
```


3. Draw XYZ

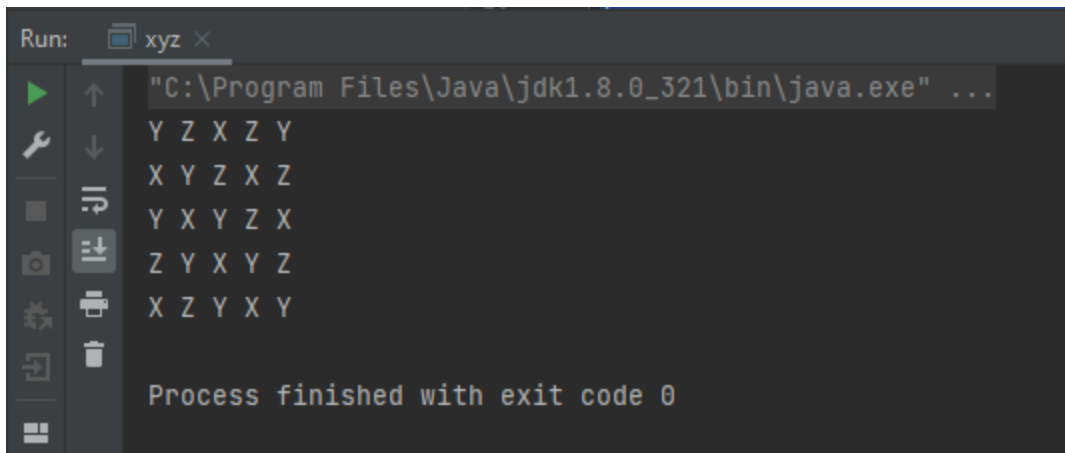
Source code

```
public class xyz {

    private static void DrawXYZ(int n){
        int index = 0;
        for (int x = 1; x <= n; x++){
            for (int y = 1; y <= n; y++){
                index = index + 1;
                if(index % 2 != 0)
                {
                    if (index % 3 == 0){
                        System.out.print("X ");
                    }else {
                        System.out.print("Y ");
                    }
                }else {
                    if (index % 3 == 0){
                        System.out.print("X ");
                    }else {
                        System.out.print("Z ");
                    }
                }

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

    public static void main(String[] args) {
        DrawXYZ(5);
    }
}
```



```
Run: xyz ×
"C:\Program Files\Java\jdk1.8.0_321\bin\java.exe" ...
Y Z X Z Y
X Y Z X Z
Y X Y Z X
Z Y X Y Z
X Z Y X Y

Process finished with exit code 0
```

4. Cetak Tabel Perkalian

Source code

```
public class cetakTabelPerkalian {

    private static void tabelPerkalian(int n){
        for (int x = 1; x <= n; x++){
            System.out.print(x);
            for (int y = 2; y <= n; y++){
                System.out.print("  " + y * x );
            }
            System.out.println("");
        }
    }

    public static void main(String[] args) {
        tabelPerkalian(9);
    }
}
```

```
Run: cetakTabelPerkalian x
"C:\Program Files\Java\jdk1.8.0_321\bin\java.exe" ...

1 2 3 4 5 6 7 8 9
2 4 6 8 10 12 14 16 18
3 6 9 12 15 18 21 24 27
4 8 12 16 20 24 28 32 36
5 10 15 20 25 30 35 40 45
6 12 18 24 30 36 42 48 54
7 14 21 28 35 42 49 56 63
8 16 24 32 40 48 56 64 72
9 18 27 36 45 54 63 72 81

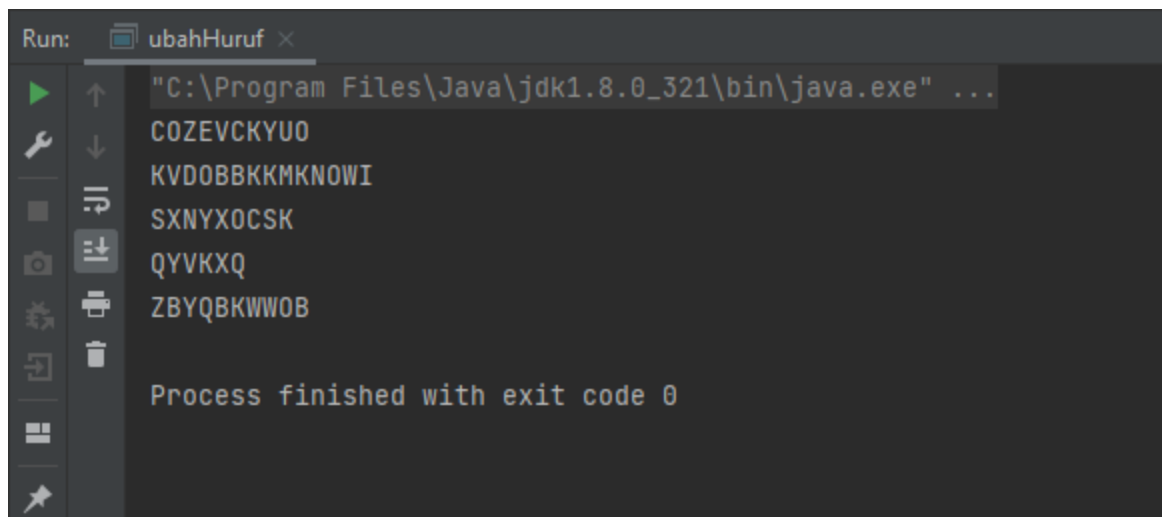
Process finished with exit code 0
```

5. Ubah Huruf

Source code

```
public class ubahHuruf {
    private static String ubahHuruf(String s){
        char[] alphabet =
{'A','B','C','D','E','F','G','H','I','J','K','L','M','N','O','P','Q',
',','R','S','T','U','V','W','X','Y','Z'};
        char[] alphabetBob = new char[26];
        String huruf = "";
        for (int i = 0; i < alphabet.length; i++){
            int sub = 0;
            sub = i + 10;
            if (sub > 25){
                sub = sub - 26;
                alphabetBob[i] = alphabet[sub];
            }else {
                alphabetBob[i] = alphabet[sub];
            }
        }
        for (int x = 0; x < s.length(); x++){
            for (int y = 0; y < alphabet.length; y++){
                if (s.charAt(x) == alphabet[y]){
                    huruf = huruf + alphabetBob[y];
                }
            }
        }
        return huruf;
    }

    public static void main(String[] args) {
        System.out.println(ubahHuruf("SEPULSA OKE")); //COZEVCK YUO
        System.out.println(ubahHuruf("ALTERRA ACADEMY")); //KVDOBBK
        KMKNOWI
        System.out.println(ubahHuruf("INDONESIA")); //SXNYXOCSK
        System.out.println(ubahHuruf("GOLANG")); //QYVKXQ
        System.out.println(ubahHuruf("PROGRAMMER")); //ZBYQBKQQOB
    }
}
```



The image shows a screenshot of a Java IDE's Run console window. The window has a title bar that says "Run: ubahHuruf x". On the left side, there is a vertical toolbar with icons for running, debugging, and other actions. The main area of the console displays the following text:

```
"C:\Program Files\Java\jdk1.8.0_321\bin\java.exe" ...  
COZEVCKYU0  
KVDOBBKKMKNOWI  
SXNYX0CSK  
QYVKXQ  
ZBYQBKWWOB  
  
Process finished with exit code 0
```

6. Mean

Source code

```
public class mean {  
    private static float Mean(float[] numbers){  
        float tambah = 0;  
        for (int i = 0; i < numbers.length; i++){  
            tambah = tambah + numbers[i];  
        }  
        return tambah / numbers.length;  
    }  
  
    public static void main(String[] args) {  
        float[] value = {1,2,3,4};  
        System.out.println(Mean(value)); // 2.5  
    }  
}
```

