تمارين عن looping

- **Write a program that prints the numbers from 1 to 10.**

  - **Using for**

```java
public class Main {

    public static void main(String[] args) {

        for (int i = 1; i <= 10; i++) {
            System.out.println(i);
        }

    }}
```

- **Using while**

```java
public class Main {

    public static void main(String[] args) {

        int i = 1;
        while (i <= 10 ) {
            System.out.println(i);
            i++;
        }

}}
```

- **Using do while**

```java
public class Main {

    public static void main(String[] args) {

        int i = 1;
        do{
            System.out.println(i);
            i++;
        } while (i <= 10 );

}}
```

- **Exercise 2: Print the numbers Descending from 10 to 1 using a for loop**

```java
public class Main {

    public static void main(String[] args) {

        for (int i = 10; i >= 0; i--) {
            System.out.println(i);
        }

}}
```

- **Exercise 3: Print the even numbers from 2 to 20 using a while loop**

```java
public class Main {

    public static void main(String[] args) {
        int i=2;
        while(i <= 20) {
            if(i % 2 == 0) {
                System.out.println(i);
            }
            i++;
        }

}}
```

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- **Exercise 4: print 5 the "program" word using a do-while loop**

```java
public class Main {

    public static void main(String[] args) {
        int i=1;

        do {
            System.out.println("program");
            i++;
        }while(i <= 5);

}}
```

- **Exercise 5: Prompt the user to enter an integer, then print the numbers from 1 to the number entered by the user using a do-while loop**

```java
import java.util.Scanner;
public class Main {

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter an integer: ");
        int num = scanner.nextInt();

        int i = 1;
        do {
            System.out.print(i + " ");
            i++;
        } while (i <= num);

}}
```

- **Exercise 6: Printing a list of even numbers from 2 to 100 using for**

```java
public class Main {

    public static void main(String[] args) {

        for (int i = 2; i <= 100; i++) {

            if(i % 2 == 0) {
                System.out.println(i);
            }

        }

    }}
```

❖ **Choose the corrct answer**

1. **what is output**

```java
int x=5;
while(x<20) {
     System.out.print(x + " ");
     x +=10;
}
```

a) **10 5**

b) **5 10**

c) **5 15**

d) **5 10 15 20**

2. what is output

```java
int x=5;
while(x<=20) {
    System.out.print(x + " ");
    x +=5;
}
```

a) **10 15 20**

b) **5 10 15**

c) **20 15 10**

d) **5 10 15 20**

3. what is output

```java
for(int x =0 ; x<3 ; x++)
    System.out.print(x + " ");
```

a) **0 1 2**

b) **1 2 3**

c) **0 1 2 3**

d) **x x x**

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4. what is output

```java
for(int i =0 ; i<3 ; i++){
        for(int j =0 ; j<2 ; j++)
                System.out.print(i + " ");
    }
```

a) **0 0 1 1 2 2**

b) **0 1 2 3**

c) **0 2 4 6**

d) **0 0 1 1 2 2 3 3**

5. what is output

```java
int x=0;
do {
        for(int i=0 ; i<3 ; i++)
                System.out.print(i + " ");

}while(x > 3);
```

a) **0 1 2 0 1 2 0 1 2**

b) **0 1 2 0 1 2**

c) **0 1 2**

d) **None**

6. what is output

```java
int x=0;
do {
    for(int i=3 ; i>=0 ; i--)
        System.out.print(i + " ");

}while(x > 3);
```
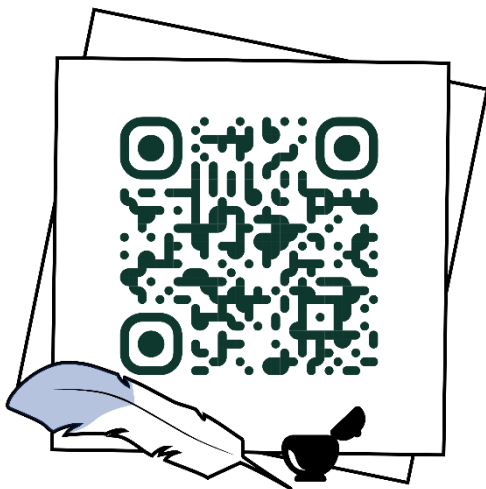
a) 3 2 1 0 3 2 1 0 3 2 1 0

b) **3 2 1 0**

c) 3 2 1 0 3 2 1 0

d) None