_____Thread_____

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A.Thread

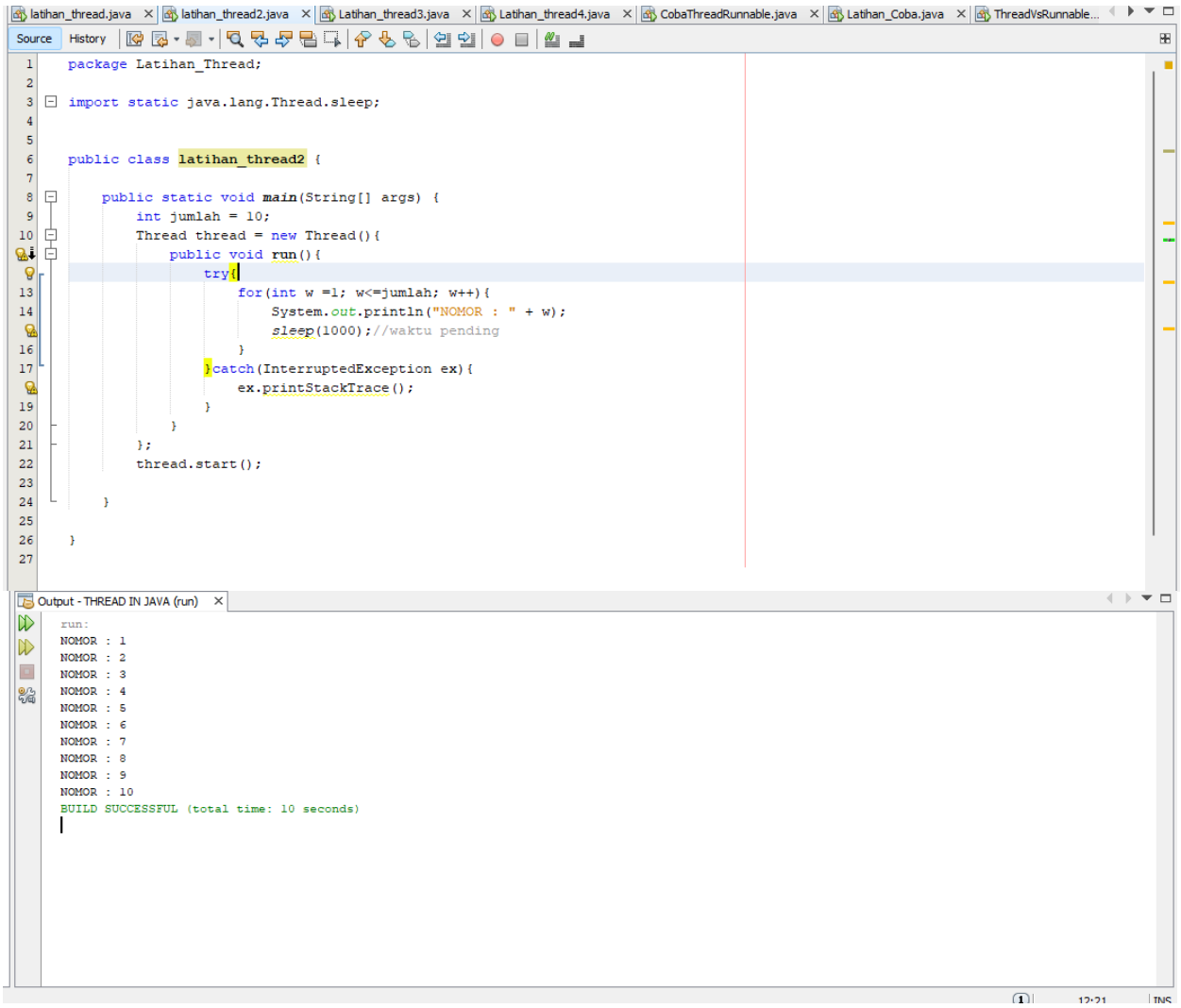
merupakan kemampuan yang disediakan oleh Java untuk membuat aplikasi yang tangguh, karena thread dalam program memiliki fungsi dan tugas tersendiri.

LATIHAN 1

```
package Latihan_Thread;

import static java.lang.Thread.sleep;
public class latihan_thread {
    Thread thread;
    int jumlah = 7;
    public static void main(String[] args) {
       latihan_thread test = new latihan_thread();
       test.proses_satu();
       test.proses_dua();
    }
    void proses_satu(){
         thread = new Thread(){
            public void run(){
                try{
                    for(int w =1; w<=jumlah; w++){
                        System.out.println("NOMOR : " + w);
                        sleep(1000);//waktu pending
                    }
                }catch(InterruptedException ex){
                     ex.printStackTrace();
                }
            }
        };
            thread.start();
    }

    void proses_dua(){
        thread = new Thread(){
            public void run(){
                try{
                    for(int w=1; w<=jumlah; w++){
                        System.out.println("Salam Programmer");
                        sleep(1000);//waktu pending
                    }
                }catch(InterruptedException ex){
                    ex.printStackTrace();
                }
            }
        };
        thread.start();
    }
}
```

```
Output - THREAD IN JAVA (run)
run:
Salam Programmer
NOMOR : 1
NOMOR : 2
Salam Programmer
Salam Programmer
NOMOR : 3
Salam Programmer
NOMOR : 4
NOMOR : 5
Salam Programmer
Salam Programmer
NOMOR : 6
Salam Programmer
NOMOR : 7
BUILD SUCCESSFUL (total time: 7 seconds)
```

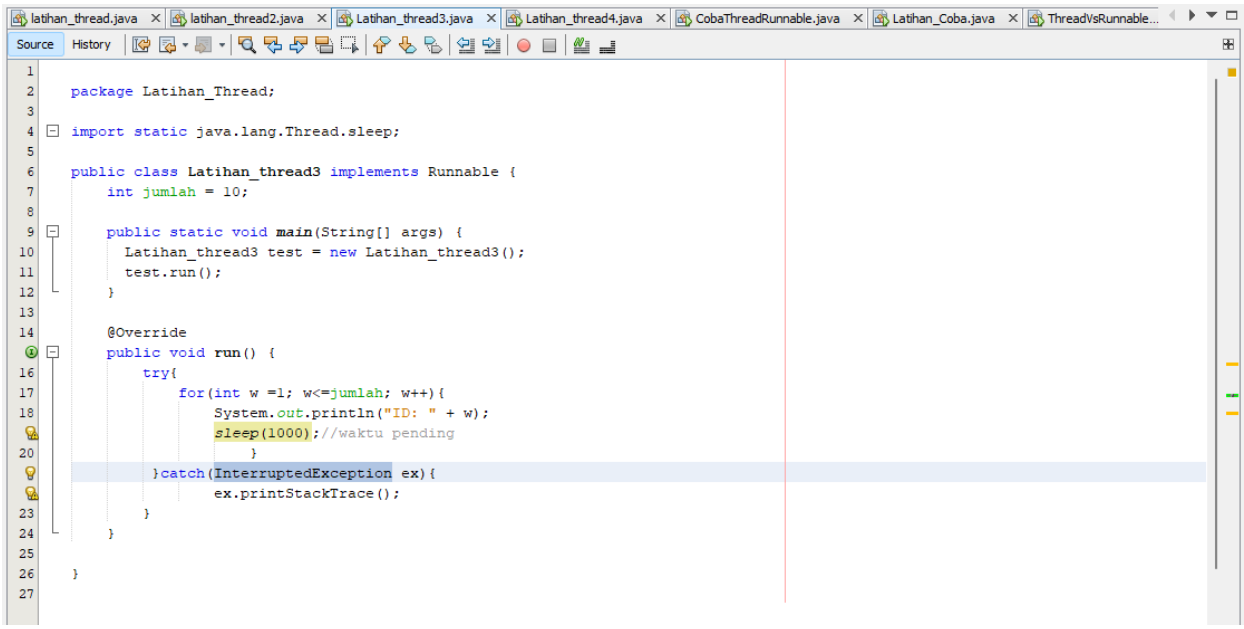
LATIHAN 2



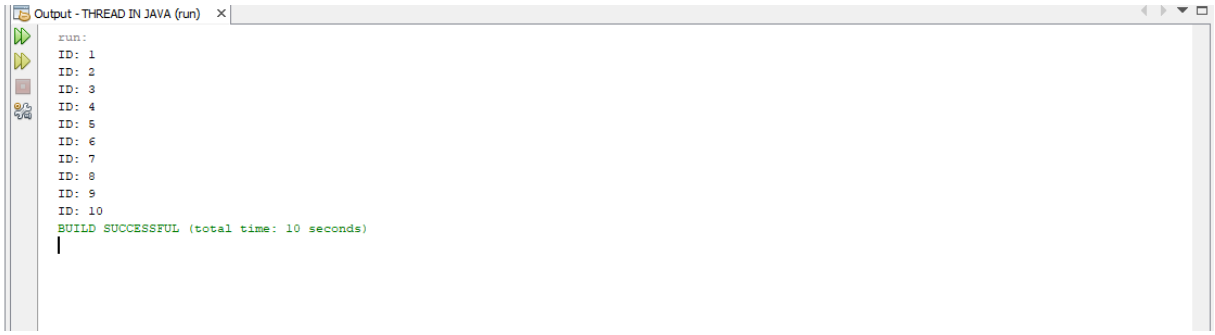
```
package Latihan_Thread;

import static java.lang.Thread.sleep;


public class latihan_thread2 {

    public static void main(String[] args) {
        int jumlah = 10;
        Thread thread = new Thread(){
            public void run(){
                try{
                    for(int w =1; w<=jumlah; w++){
                        System.out.println("NOMOR : " + w);
                        sleep(1000);//waktu pending
                    }
                }catch(InterruptedException ex){
                    ex.printStackTrace();
                }
            }
        };
        thread.start();

    }

}
```

```
Output - THREAD IN JAVA (run)
run:
NOMOR : 1
NOMOR : 2
NOMOR : 3
NOMOR : 4
NOMOR : 5
NOMOR : 6
NOMOR : 7
NOMOR : 8
NOMOR : 9
NOMOR : 10
BUILD SUCCESSFUL (total time: 10 seconds)
```

LATIHAN 3



```
package Latihan_Thread;

import static java.lang.Thread.sleep;

public class Latihan_thread3 implements Runnable {
    int jumlah = 10;

    public static void main(String[] args) {
      Latihan_thread3 test = new Latihan_thread3();
      test.run();
    }

    @Override
    public void run() {
        try{
            for(int w =1; w<=jumlah; w++){
                System.out.println("ID: " + w);
                sleep(1000);//waktu pending
                    }
         }catch(InterruptedException ex){
                ex.printStackTrace();
        }
    }

}
```



LATIHAN 4

```java
package Latihan_Thread;
public class Latihan_thread4 {
    public static void main(String[] args) {
        Baju baju1 = new Baju("Baju 1");
        Baju baju2 = new Baju("Baju 2");
        baju1.start();
        baju2.start();
    }
}
    class Baju extends Thread{
        //konstruktor
        public Baju (String id){
            super(id);
        }
        //mendefinisikan sendiri rum()
    @Override
    public void run(){
        String nama = getName();
            for (int i =0; i<5; i++){
                try{
                    sleep(1000);//tunggu satu detik
                }catch(InterruptedException ie){
                    System.out.println("Terinterupsi");
                }
                System.out.println("Thread " + nama +":Posisi" + 1);
            }
        }
    }
```

```
Output - THREAD IN JAVA (run)
run:
Thread Baju 1:Posisi1
Thread Baju 2:Posisi1
Thread Baju 2:Posisi1
Thread Baju 1:Posisi1
Thread Baju 1:Posisi1
Thread Baju 2:Posisi1
Thread Baju 2:Posisi1
Thread Baju 1:Posisi1
Thread Baju 1:Posisi1
Thread Baju 2:Posisi1
BUILD SUCCESSFUL (total time: 5 seconds)
```

LATIHAN 5

```java
package Latihan_Thread;

public class Latihan_Coba {


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

        Thread kopasus = new Thread();
        kopasus.start();
        while(true){

            for(i=1; i<=20; i++){
                System.out.println("Pasukan kopasus Berhasil menyelamatkan ibu hamil ke : " + i);

                try{
                    kopasus.sleep(1000);
                }catch(Exception e){
                    e.getStackTrace();
                }
                if(i==20){
                    System.out.println("Pasukan marinir datang ke TKP ");
                }
            }
            Thread marinir = new Thread();
            marinir.start();

                for(a=1; a<=20; a++){
                    System.out.println("Pasukan marinir berhasil membunuh teroris ke : " + a);
                    if(a<=15){
                        System.out.println("Pasukan marinir berhasil menyelamatkan warga manusia ke : " + a);
                    }
                    try{
                        marinir.sleep(1000);
                    }catch(Exception e){
                        e.getStackTrace();
                    }
                    if(a==50){
                        System.out.println("Pasukan infanteri datang ke TKP ");
                    }
            }
                    break;
        }

    }
}
```

```
Output - THREAD IN JAVA (run)
run:
Pasukan kopasus Berhasil menyelamatkan ibu hamil ke : 1
Pasukan kopasus Berhasil menyelamatkan ibu hamil ke : 2
Pasukan kopasus Berhasil menyelamatkan ibu hamil ke : 3
Pasukan marinir berhasil membunuh teroris ke : 1
Pasukan marinir berhasil menyelamatkan warga manusia ke : 1
Pasukan marinir berhasil membunuh teroris ke : 2
Pasukan marinir berhasil menyelamatkan warga manusia ke : 2
Pasukan marinir berhasil membunuh teroris ke : 3
Pasukan marinir berhasil menyelamatkan warga manusia ke : 3
Pasukan marinir berhasil membunuh teroris ke : 4
Pasukan marinir berhasil menyelamatkan warga manusia ke : 4
Pasukan marinir berhasil membunuh teroris ke : 5
Pasukan marinir berhasil menyelamatkan warga manusia ke : 5
Pasukan infanteri datang ke TKP
BUILD SUCCESSFUL (total time: 8 seconds)
```

LATIHAN 6

latihan_thread.java | latihan_thread2.java | Latihan_thread3.java | Latihan_thread4.java | **CobaThreadRunnable.java** | Latihan_Coba.java | ThreadVsRunn...

Source | History

```
1  package Latihan_Thread;
2  import static java.lang.Thread.sleep;
3  public class CobaThreadRunnable {
4
5      public static void main(String[] args) {
6          Thread celana1 = new Thread(new Celana("Celana 1"));
7          Thread celana2 = new Thread(new Celana("Celana 2"));
8          celana1.start();
9          celana2.start();
10     }
11 }
12     class Celana implements Runnable{
13         String nama;
14         //konstruktor
15         public Celana (String id){
16             nama =id;
17         }
18         //mendefinisikan sendiri rum()
19     @Override
20     public void run(){
21             for (int i =0; i<5; i++){
22                 try{
23                     sleep(1000);//tunggu satu detik
24                 }catch(InterruptedException ie){
25                     System.out.println("Terinterupsi");
26                 }
27                 System.out.println("Thread " + nama +":Posisi" + 1);
28             }
29         }
30     }
31
```

Output - THREAD IN JAVA (run)

```
run:
Thread Celana 2:Posisi
Thread Celana 1:Posisi
Thread Celana 2:Posisi
Thread Celana 1:Posisi
Thread Celana 1:Posisi
Thread Celana 2:Posisi
Thread Celana 1:Posisi
Thread Celana 2:Posisi
Thread Celana 1:Posisi
Thread Celana 2:Posisi
BUILD SUCCESSFUL (total time: 5 seconds)
```

LATIHAN 7

Source | History

```
1  package Latihan_Thread;
2  public class ThreadVsRunnable {
3      public static void main(String[] args) {
4          //akan jalan ketika method start() dipanggil
5          Thread buah = new Thread(new Buah());
6
7          buah.start();
8
9          Sayur sayur = new Sayur();
10
11         sayur.start();
12     }
13
14 }
15
16 class Buah implements Runnable{
17     public void run(){
18         for(int i = 0; i<3; i++){
19                 try {
20                     Thread.currentThread().sleep(1000);
21                 } catch (InterruptedException ex) {
22                     System.out.println("Terinterupsi");
23                 }
24             System.out.println("Buah ke : " + i);
25         }
26     }
27 }
28
```

```
28
29  class Sayur extends Thread{
30      public void run(){
31          for(int i = 0; i<3; i++){
32              try {
33                  Thread.currentThread().sleep(1000);
34              } catch (InterruptedException ex) {
35                  System.out.println("Terinterupsi");
36              }
37              System.out.println("Sayur ke : " + i);
38          }
39      }
40  }
41
```



```
Output - THREAD IN JAVA (run)
run:
Sayur ke : 0
Buah ke : 0
Buah ke : 1
Sayur ke : 1
Buah ke : 2
Sayur ke : 2
BUILD SUCCESSFUL (total time: 3 seconds)
```

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