PENGUJIAN PERANGKAT LUNAK

PEMBUATAN DAN UNIT TESTING PENGHITUNGAN INDEX NILAI MAHASISWA

Oleh :

Agung Adhika Mas Pratama (1905551134)

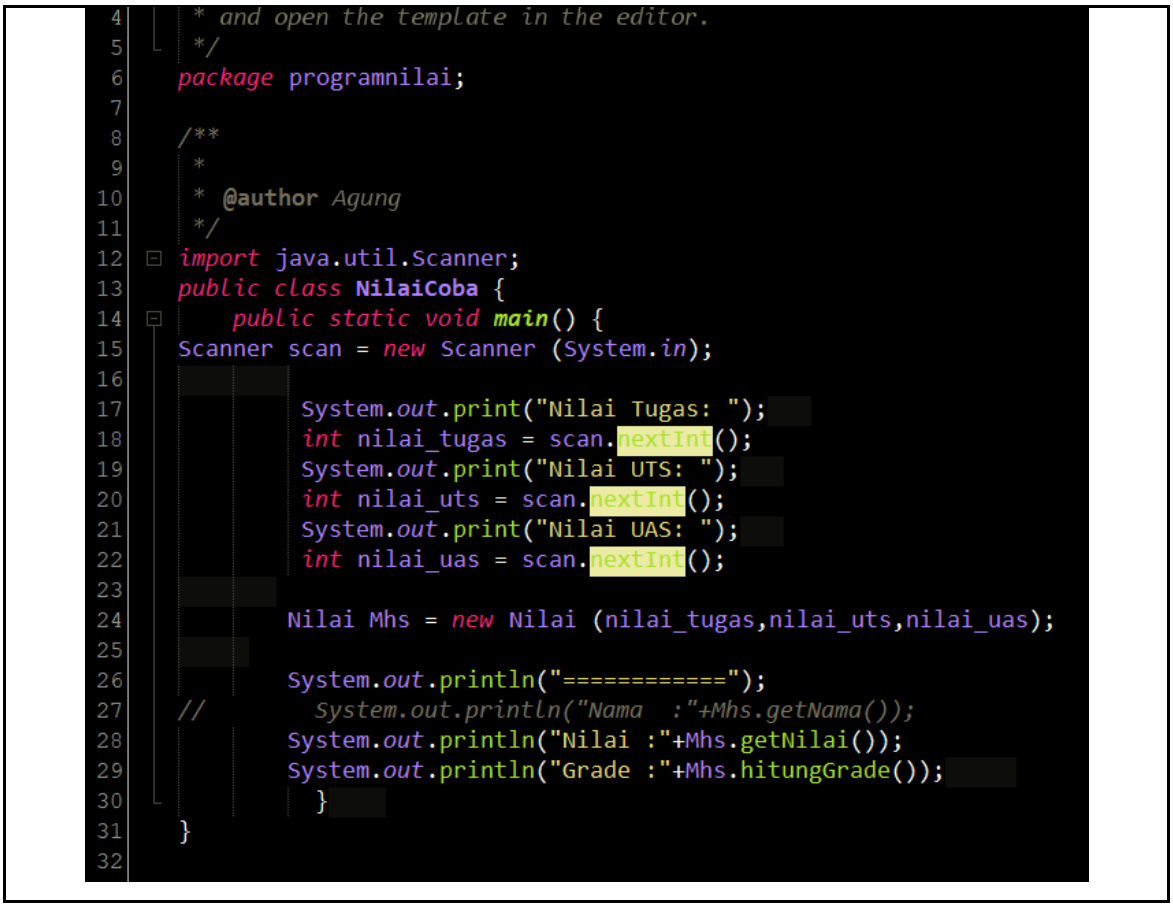
PROGRAM STUDI TEKNOLOGI INFORMASI

FAKULTAS TEKNIK

UNIVERSITAS UDAYANA

2022

Program Main



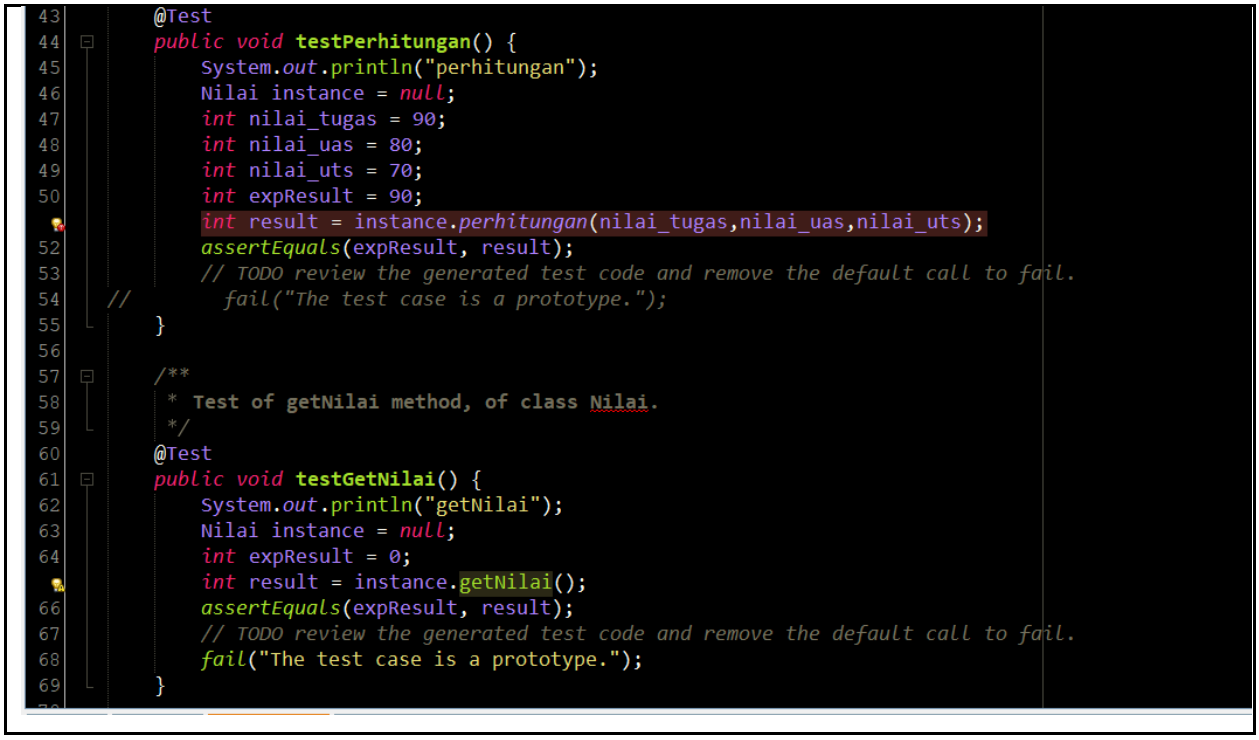
```
 * and open the template in the editor.
 */
package programnilai;

/**
 *
 * @author Agung
 */
import java.util.Scanner;
public class NilaiCoba {
    public static void main() {
Scanner scan = new Scanner (System.in);

            System.out.print("Nilai Tugas: ");
            int nilai_tugas = scan.nextInt();
            System.out.print("Nilai UTS: ");
            int nilai_uts = scan.nextInt();
            System.out.print("Nilai UAS: ");
            int nilai_uas = scan.nextInt();

           Nilai Mhs = new Nilai (nilai_tugas,nilai_uts,nilai_uas);

           System.out.println("============");
//           System.out.println("Nama  :"+Mhs.getNama());
           System.out.println("Nilai :"+Mhs.getNilai());
           System.out.println("Grade :"+Mhs.hitungGrade());
            }
}
```

Fungsi Perhitungan Indeks Nilai Mahasiswa

```java
package programnilai;

/**
 *
 * @author Agung
 */

class Nilai{
    private int nilai_uts, nilai_tugas, nilai_uas, nilai_akhir;
    private char grade;

     public Nilai(int a, int b,int c, int d){
        nilai_uts=a;
        nilai_uas=b;
        nilai_tugas=c;
        nilai_akhir=d;
    }

    Nilai(int nilai_tugas, int nilai_uts, int nilai_uas) {
        throw new UnsupportedOperationException("Not supported yet."); //To change body of generated methods, ch
    }

     public int perhitungan(){ //method kirim nama
        nilai_akhir = (int) (0.20 * nilai_tugas + 0.40 * nilai_uts + 0.40 * nilai_uas);
        return nilai_akhir;
       }

       public int getNilai(){        //method kirim nilai
           return nilai_akhir;
```

```java
        }

        public int getNilai(){        //method kirim nilai
            return nilai_akhir;
        }

        public char hitungGrade(){  //method seleksi grade
          if ((nilai_akhir>=80) && (nilai_akhir<=100))
              grade='A';
          else if ((nilai_akhir>=70) && (nilai_akhir<=79))
              grade='B';
          else if ((nilai_akhir>=60) && (nilai_akhir<=69))
              grade='C';
          else if ((nilai_akhir>=50) && (nilai_akhir<=59))
              grade='D';
          else
              grade='E';

          return grade;
        }

    }
```

UNIT TESTING



```
43      @Test
44      public void testPerhitungan() {
45          System.out.println("perhitungan");
46          Nilai instance = null;
47          int nilai_tugas = 90;
48          int nilai_uas = 80;
49          int nilai_uts = 70;
50          int expResult = 90;
            int result = instance.perhitungan(nilai_tugas,nilai_uas,nilai_uts);
52          assertEquals(expResult, result);
53          // TODO review the generated test code and remove the default call to fail.
54  //          fail("The test case is a prototype.");
55      }
56
57      /**
58       * Test of getNilai method, of class Nilai.
59       */
60      @Test
61      public void testGetNilai() {
62          System.out.println("getNilai");
63          Nilai instance = null;
64          int expResult = 0;
            int result = instance.getNilai();
66          assertEquals(expResult, result);
67          // TODO review the generated test code and remove the default call to fail.
68          fail("The test case is a prototype.");
69      }
```