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Praktikum Pemprograman Dasar 2

QUIZ

LinkedListNode.java

```java
import java.util.ArrayList;

public class LinkedListNode {
    LinkedListNode next;
    LinkedListNode prev;
    ArrayList<addhashdata> data;

    /*
     * Constructor  set this.data into new_data
    * set this.prev into null
    * set this.next into */
    LinkedListNode(ArrayList<addhashdata> new_data) {
        this.data = new_data;
        this.prev = null;
        this.next = null;
    }

    /* set this.prev into other
    * if other is not null, set    */
    void set_prev(LinkedListNode other) {
            this.prev = other;
        if (other != null) {
            other.next = this;
        }
    }

    /* set this.next into other
    * if other is not null, set other.prev into this
    */
    void set_next(LinkedListNode other) {
        this.next = other;
        if (other != null) {
            other.prev = this;
        }
    }
}
```

queueue.java

```java
public class queueue{

    LinkedListNode head;
    LinkedListNode tail;

    queueue() {
        this.head = null;
        this.tail = null;
    }

    /* First set a Node named current into head
    * while current is not null, print current.data, set current = current.ne
    * print end of line
     */
    void print() {
        LinkedListNode current = this.head;
        int i = 1;
        while (current != null) {

            System.out.println(current.data);
            current = current.next;
            i = i+1;
        }
        if(this.head == null){
            System.out.println("kosong");
        }else{
            System.out.println("");
        }

    }

    public int size() {
        int r = 0;
        LinkedListNode current = this.head;
        while (current != null) {
            current = current.next;
            r = r+1;
        }
        return r;
    }

    /* if LinkedList is empty, set new_node as head and tail
    * if LinkedList is not empty, set tail.next into new_node, set
      new_node.prev into tail, and make new_node a new tail
     */
    void push(LinkedListNode new_node) {
        if (this.head == null && this.tail == null) {
            head = new_node;
            tail = new_node;
        } else {
            tail.next = new_node;
            new_node.prev = tail;
            tail = new_node;
        }
    }

    /* declare a node named taken
    * if LinkedList is empty, set taken into null
    * if linkedList consists only one node, set taken = head, set both head
    and tail into null
    * if linkedList consists of two or more nodes, set taken = head,
    set head.next into new head, cut off all the link between taken and head
    * return taken
     */
    LinkedListNode qpop() {
        LinkedListNode taken = null;
        if (this.head == null && this.tail == null) {
            taken = null;
        } else if (this.head == this.tail) {
            taken = head;
            head = null;
            tail = null;
        } else {
            taken = head;
            //tail.prev.next = null;
            head = head.next;
        }
        return taken;
    }

    /* declare a node named taken
    * if LinkedList is empty, set taken into null
    * if linkedList consists only one node, set taken = tail, set both head
    and tail into null
    * if linkedList consists of two or more nodes, set taken = tail,
    set tail.prev into new tail, cut off all the link between taken and tail
    * return taken
     */
    LinkedListNode spop() {
        LinkedListNode taken = null;
        if (this.head == null && this.tail == null) {
            taken = null;
        } else if (this.head == this.tail) {
            taken = tail;
            head = null;
            tail = null;
        } else {
            taken = tail;
            tail.prev.next = null;
            tail = tail.prev;
        }
        return taken;
    }
}
```

HashData.java

```java
//import java.util.Scanner;
import java.util.Hashtable;
import java.util.Random;
import java.util.ArrayList;
import java.math.*;

class addhashdata{
    String nama;
    int harga;
    addhashdata(String b, int c){
        nama = b;
        harga = c;
    }
}
public class HashData{
    static Hashtable<String,ArrayList<addhashdata>> proses(){
        Hashtable<String,ArrayList<addhashdata>>  data =  new Hashtable<String,ArrayList<addhashdata>>();
        ArrayList<addhashdata> AofD = new ArrayList<addhashdata>();
        ArrayList<String> namaB = new ArrayList<String>();
        ArrayList<Integer> hargaB = new ArrayList<Integer>();

        namaB.add("Sampo");
        namaB.add("beras");
        namaB.add("Sapu");
        namaB.add("kasur");
        namaB.add("meja");
        namaB.add("krupuk");
        namaB.add("sambel");
        namaB.add("Susu");
        namaB.add("charger");
        namaB.add("solder");
        namaB.add("coklat");
        namaB.add("fanta");
        namaB.add("pulpen");

        hargaB.add(10000);
        hargaB.add(15000);
        hargaB.add(7000);
        hargaB.add(153000);
        hargaB.add(23000);
        hargaB.add(9000);
        hargaB.add(4000);
        hargaB.add(50000);
        hargaB.add(70000);
        hargaB.add(89000);
        hargaB.add(100000);
        hargaB.add(230000);
        hargaB.add(32300);

        for(int i = 0; i < hargaB.size(); i++){
            AofD = new ArrayList<addhashdata>();
            AofD.add(new addhashdata(namaB.get(i), hargaB.get(i)));
            data.put(("B"+i),AofD);
        }
        return data;
    }

    static ArrayList<String> random(){
        ArrayList<String> dato = new ArrayList<String>();
        for(int x=0; x<5;x++){
            Random a = new Random();
            int y = a.nextInt(11);
            dato.add("B"+y);
        }
        return dato;
    }
}
```

addQ.java

```java
import java.util.ArrayList;

public class addQ{
    static ArrayList<String> g;
    static ArrayList x;
    static ArrayList addto(){
         x = HashData.random();
         ArrayList<String> g = new ArrayList<String>();
         for(int y =0; y<x.size();y++){
            g.add(x.get(y).toString());
         }
         return g;
    }
    static void print(){
        ArrayList p = addto();
        for(int o = 0;o<addto().size();o++){
            System.out.print(p.get(o)+"\n");
           System.out.println(HashData.proses().get(p.get(o).toString()).get(0).nama+"\t"+HashData.proses().get(p.get(o).toString()).get(0).harga);
        }
    }
}
```

MainApp.java

```java
import java.util.Scanner;
import java.util.ArrayList;
import java.math.*;

public class MainApp{
    static String kw;
    public static void main(String args[]){
        do{
            ArrayList p = addQ.addto();
            ArrayList d = p;
            Scanner t = new Scanner(System.in);
            ArrayList<ArrayList<String>> data =  new ArrayList<ArrayList<String>>();
            ArrayList<String> r = new ArrayList<String>();
             System.out.println("=============");
             System.out.println("Selamat datang di aplikasi tebak harga");
             System.out.println("coba tebak harga barang di bawah ini : ");
             System.out.println("=============");
             for(int f = 0;f<d.size();f++){
                 System.out.println(HashData.proses().get(p.get(f).toString()).get(0).nama);
             }
            System.out.println("=============");
        for(int y = 0; y<p.size();y++){
            System.out.println("Berapa harga untuk : "+ HashData.proses().get(p.get(y).toString()).get(0).nama);
            int j = 0;
            Scanner a = new Scanner(System.in);
            int harga = a.nextInt();
            if((Math.abs(HashData.proses().get(p.get(y).toString()).get(0).harga - harga))<= 3000 ){
                r = new ArrayList<String>();
                r.add("Benar");
                r.add(HashData.proses().get(p.get(y).toString()).get(0).nama);
                r.add(Integer.toString(HashData.proses().get(p.get(y).toString()).get(0).harga));
                r.add(Integer.toString(harga));
                r.add(Integer.toString(Math.abs(HashData.proses().get(p.get(y).toString()).get(0).harga - harga)));
                data.add(r);
            }else if((Math.abs(HashData.proses().get(p.get(y).toString()).get(0).harga - harga))> 3000){
                r = new ArrayList<String>();
                r.add("Salah");
                r.add(HashData.proses().get(p.get(y).toString()).get(0).nama);
                r.add(Integer.toString(HashData.proses().get(p.get(y).toString()).get(0).harga));
                r.add(Integer.toString(harga));
                r.add(Integer.toString(Math.abs(HashData.proses().get(p.get(y).toString()).get(0).harga - harga)));
                data.add(r);
            } else{
                System.out.println("System ERROR code 127 : invalid price inputed");
            }
            j = j+1;
        }
        System.out.println("=============");
        System.out.println("Hasil Jawaban");
        System.out.println("=============");
        System.out.println("Barang\t Jawaban anda\t Harga asli\t harga yang anda pilih\t selisih harga");
        System.out.println("================================================================================");
        for(int c =0;c<r.size();c++){
            System.out.println(data.get(c).get(1)+"\t\t"+data.get(c).get(0)+"\t\t"+data.get(c).get(2)+"\t\t\t"+data.get(c).get(3)+"\t\t"+data.get(c).get(4));
        }
        System.out.println("================================================================================");
        System.out.println("note : jika harga yang anda masukkan memiliki selisih tidak lebih dari 3000\n\n");
        System.out.println("Apakah ingin main lagi? (Y/T)");
        kw = t.next();
        if(!kw.equals("Y")&&!kw.equals("T")){
            System.out.println("System Error 128 : input miss match");
            break;
        }
        }while(!kw.equals("T"));
        System.out.println("Terimakasih");
    }

}
```

Output :

```
budosen@budosen-pc:/mnt/b2c7efbf-ef52-437d-8ca7-e46ea581cbba/Kuliah/materikuliah/Semester 3/Praktikum Pemrograma
n Dasar 2/quiz$ javac *.java -Xdiags:verbose && java MainApp
=============
Selamat datang di aplikasi tebak harga
coba tebak harga barang di bawah ini :
=============
Susu
coklat
Sampo
Sampo
charger
=============
Berapa harga untuk : Susu
10000
Berapa harga untuk : coklat
20000
Berapa harga untuk : Sampo
300000
Berapa harga untuk : Sampo
40000
Berapa harga untuk : charger
100000
=============
Hasil Jawaban
=============
Barang   Jawaban anda    Harga asli      harga yang anda pilih   selisih harga
================================================================================
Susu            Salah           50000                   10000           40000
coklat          Salah           100000                  20000           80000
Sampo           Salah           10000                   300000          290000
Sampo           Salah           10000                   40000           30000
charger         Salah           70000                   100000          30000
================================================================================
note : jika harga yang anda masukkan memiliki selisih tidak lebih dari 3000


Apakah ingin main lagi? (Y/T)
```

github : https://github.com/bijancot/materikuliah/tree/master/Semester%203/Praktikum%20Pemprograman%20Dasar%202/quiz