**Koding Stack dan Queue**

1. **Koding Stack**
2. **Class 1 : Nilai Matkul**

package NilaiMatkul;

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\*

\* @author Multikom

\*/

public class NilaiMatkul {

private String nim;

private String nama;

private double nilai;

NilaiMatkul () {

}

void setNim(String nim){

this.nim = nim;

}

String getNim() {

return nim;

}

void setNama(String nama) {

this.nama = nama;

}

String getNama() {

return nama;

}

void setNilai (double nilai){

this.nilai = nilai;

}

double getNilai() {

return nilai;

}

}

1. **Class 2 : Stack**

package NilaiMatkul;

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\* @author Multikom

\*/

public class Stack {

int top;

NilaiMatkul [] data = new NilaiMatkul [7];

Stack(){

for (int a = 0; a < 7; a++){

data [a] = new NilaiMatkul ();

}

}

void setTop (int top) {

this.top = top;

}

int getTop(){

return top;

}

void createEmpty(){

top = -1;

}

boolean isEmpty (){

boolean hasil = false;

if (top == -1){

hasil = true;

}

return hasil;

}

boolean isFull() {

boolean hasil = false;

if (top == data.length - 1){

}

return hasil;

}

void push (String nim, String nama, double nilai){

if (isFull () == true){

System.out.println("Mohon maaf stack penuh");

}

else{

if(isEmpty () == true){

top = 0;

data[0].setNim(nim);

data[0].setNama(nama);

data[0].setNilai(nilai);

}

else{

top = top + 1;

data[top].setNim(nim);

data[top].setNama(nama);

data[top].setNilai(nilai);

}

}

}

void pop(){

if(top == 0){

top = -1;

}else{

if (top != -1){

top = top -1;

}

}

}

void printStack(){

if (top !=-1 ){

System.out.println("Dimohon untuk mengisi stack");

int a;

for (a = top; a >=0 ; a--){

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

System.out.println("elemen ke-" + a);

System.out.println("nim : " +data[a].getNim());

System.out.println("nama : " +data[a].getNama());

System.out.println("nilai : " +data[a].getNilai());

}

System.out.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

}

else{

System.out.println("Selamat Datang");

}

}

}

1. **Class 3 : Coba Stack Statis**

package NilaiMatkul;

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\*

\* @author Multikom

\*/

public class CobaStackStatis {

public static void main(String args[]) {

Stack S = new Stack();

S.createEmpty();

S.printStack();

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

S.push("E31201199", "Ajeng", 90.00);

S.push("E31201198", "Nada", 85.25);

S.push("E31201197", "Riska", 90.00);

S.printStack();

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

S.pop();

S.pop();

S.printStack();

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

}

}

1. **Koding Queue**
2. **Class 1 : Nilai Matkul**

package Tutorial;

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\*

\* @author Multikom

\*/

public class NilaiMatkul {

private String nim;

private String nama;

private double nilai;

NilaiMatkul () {

}

void setNim(String nim){

this.nim = nim;

}

String getNim() {

return nim;

}

void setNama(String nama) {

this.nama = nama;

}

String getNama() {

return nama;

}

void setNilai (double nilai){

this.nilai = nilai;

}

double getNilai() {

return nilai;

}

}

1. **Class 2 : Queue**

package Tutorial;

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\* @author Multikom

\*/

public class Queue {

private int first;

private int last;

private NilaiMatkul[] data = new NilaiMatkul [10];

Queue(){

for (int a = 0; a < 10; a++){

data [a] = new NilaiMatkul();

}

}

void setFirst(int first){

this.first =first;

}

int getFirst(){

return first;

}

int getLast(){

return last;

}

void createEmpty(){

first = -1;

last = -1;

}

boolean isEmpty(){

boolean hasil = false;

if(first == -1){

hasil = true;

}

return hasil;

}

boolean isFull(){

boolean hasil = false;

if(last == 9){

hasil = true;

}

return hasil;

}

void add(String nim, String nama, double nilai){

if(isEmpty()== true){

last = 0;

first = 0;

data [0].setNim(nim);

data [0].setNama(nama);

data [0].setNilai(nilai);

}

else{

if(isFull () != true ){

last = last +1;

data [last].setNim(nim);

data [last].setNama(nama);

data [last].setNilai(nilai);

}

}

}

void del(){

if(last == 0){

first = -1;

last = -1;

}

else{

int i;

for (i=(first + 1); i <= last; i++){

data[i-1].setNim(data[i].getNim());

data[i-1].setNama(data[i].getNama());

data[i-1].setNilai(data[i].getNilai());

}

last = last -1;

}

}

void printQueue(){

if(first != -1){

System.out.println("-----------isi queue-----------");

int i;

for(i= last; i >= first; i--){

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

System.out.println("elemen ke :"+i);

System.out.println("nim :" + data[i].getNim());

System.out.println("nama :" + data[i].getNama());

System.out.println("nilai :" +data[i].getNilai());

}

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

}

else{

System.out.println("queue kosong");

}

}

}

1. **Class 3 : Coba Queue Statis**

package Tutorial;

/\*\*

\*

\* @author Multikom

\*/

public class CobaQueueStatic {

public static void main(String[]args){

Queue Q = new Queue();

Q.createEmpty();

Q.printQueue();

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

Q.add("E31201199", "Ajeng", 90.00);

Q.add("E31201198", "Nada", 85.25);

Q.add("E31201197", "Riska", 90.00);

Q.printQueue();

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

Q.del();

Q.del();

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

}

}