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**OBJECT ORIENTED PROGRAMMING LAB**

**Experiment No.: 26**

**Aim**

Program to demonstrate the working of Map interface by adding, changing and removing elements.

**Procedure**

import java.util.\*;

public class hm {

public static void main(String[] args) {

Map<Integer, String> map= new HashMap<>();

Scanner sc= new Scanner(System.in);

int choice;

boolean iscontinue=true;

int map\_count=0;

while(iscontinue){

System.out.println("\nMap Operations that you can perform are:\n1. Adding an element.\n2. Changing an element.\n3. Deleting an element.\n4. Display all elements.\n5. Exit.");

System.out.print("\nEnter the choice: ");

choice= sc.nextInt();

switch(choice){

case 1: {

System.out.print("\nEnter the string value for new element: ");

String item= sc.nextLine()+ sc.nextLine();

map\_count++;

map.put(map\_count,item);

break;

}

case 2: {

if(map.size() <= 0){

System.out.println("\nCannot chnage any element !! The map is empty.");

}

else{

System.out.print("\nEnter the key value of the element that you want to change: ");

int key= sc.nextInt();

boolean iskeyvalid= false;

for(Map.Entry<Integer, String> item: map.entrySet()){

if(key==item.getKey()){

System.out.print("\nEnter the new element to update from the map: ");

String value= sc.nextLine()+ sc.nextLine();

map.put(key,value);

iskeyvalid= true;

break;

}

}

if(!iskeyvalid){

System.out.println("\nInvalid key value !! Please enter an existing key value.");

}

}

break;

}

case 3: {

if(map.size() <= 0){

System.out.println("\nCannot delete any element !! The map is empty.");

}

else{

System.out.print("\nEnter the key value of the element that you want to delete: ");

int key= sc.nextInt();

boolean iskeyvalid= false;

for(Map.Entry<Integer, String> item: map.entrySet()){

if(key==item.getKey()){

iskeyvalid=true;

map.remove(key);

System.out.println("\nThe mentioned element is successfully deleted.");

break;

}

}

if(!iskeyvalid)

System.out.println("\nInvalid key value !! Please enter an existing key value.");

}

break;

}

case 4: {

if(map.size() <= 0){

System.out.println("\nCannot display any elements !! The map is empty.");

}

else{

System.out.println("\nThe elements in the map are : ");

for(Map.Entry<Integer, String> item: map.entrySet())

System.out.println("\nItem Key- "+item.getKey()+" & Item Value- "+item.getValue());

}

break;

}

case 5: {

iscontinue= false;

break;

}

default:{

System.out.println("\nInvalid choice !! Please try again !!");

}

}

}

sc.close();

}

}

**Output Screenshot**



