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SRN-PES2UG19CS013

OOAD with JAVA

Hands on assignment-1

Code

import java.util.\*;

class Card

{

String suit;

String value;

Card(String suit,String value)

{

this.suit=suit;

this.value=value;

}

}

class Pile4 {

// store elements of stack

private String arr[];

// represent top of stack

private int top;

// total capacity of the stack

private int capacity;

Pile4(int size) {

// initialize the array

// initialize the stack variables

arr = new String[size];

capacity = size;

top = -1;

}

public void place(Card obj) {

if (isFull()) {

System.out.println("PILE FULL");

// terminates the program

System.exit(1);

}

// insert element on top of stack

System.out.println("Inserting " +obj.suit+" " +obj.value);

arr[++top] =obj.suit+obj.value;

}

public String draw() {

// if stack is empty

// no element to pop

if (isEmpty()) {

System.out.println("PILE EMPTY");

// terminates the program

System.exit(1);

}

// pop element from top of stack

return arr[top--];

}

public void peek() {

// if stack is empty

// no element to pop

if (isEmpty()) {

System.out.println("PILE EMPTY");

// terminates the program

System.exit(1);

}

// pop element from top of stack

System.out.println(arr[top]);

}

public void printStack() {

for (int i = 0; i <= top; i++) {

System.out.print(arr[i] + ", ");

}

System.out.println();

}

// return size of the stack

public int getSize() {

return top + 1;

}

// check if the stack is empty

public Boolean isEmpty() {

return top == -1;

}

// check if the stack is full

public Boolean isFull() {

return top == capacity - 1;

}

public static void main(String[] args) {

Pile4 pile = new Pile4(10);

//Scanner sc= new Scanner(System.in);

//System.out.print("Enter option:place,draw,peek");

Scanner input = new Scanner(System.in);

boolean mainLoop = true;

//String str= sc.nextLine();

//if(str=="place")

//{

// Scanner sc2= new Scanner(System.in);

// System.out.print("enter card suit");

//}

int choice;

while(true){

System.out.print("1.) Place \n");

System.out.print("2.) Draw\n");

System.out.print("3.) Peek\n");

System.out.print("4.) Exit\n");

System.out.print("\nEnter Your Menu Choice: ");

choice = input.nextInt();

switch(choice){

case 1:

String str1,str2;

Scanner sc2= new Scanner(System.in);

System.out.print("Please Enter The Card Suit ");

str1= sc2.nextLine();

System.out.print("\nPlease Enter The Card Value: ");

str2= sc2.nextLine();

Card obj=new Card(str1,str2);

pile.place(obj);

break;

case 2:

pile.draw();

break;

case 3:

pile.peek();

break;

case 4:

System.out.println("Exiting Program...");

System.exit(0);

break;

default :

System.out.println("This is not a valid Menu Option! Please Select Another");

break;

}

}

}

}

Output

Text

Description automatically generated with medium confidence

Table

Description automatically generated with medium confidence