**Object Oriented Analysis and Design using Java**

**Practice Assignment**

|  |  |  |  |
| --- | --- | --- | --- |
| Vanshika Goel | PES1UG20CS484 | Section H | Roll No 40 |

import java.util.\*;

class Card {

public String cardsuit;

public String value;

public Card(String cardsuit, String value) {

this.cardsuit = cardsuit;

this.value = value;

}

public String getSuit() {

return cardsuit;

}

public String getValue() {

return value;

}

public String toString() {

return cardsuit + " " + value;

}

}

class Pile

{

public Stack<Card> cards;

public Pile() {

cards = new Stack<Card>();

}

public void pushCard(Card card) {

if (cards.size() < 10) {

cards.push(card);

}

else

{

System.out.println("The pile is already full");

}

}

public Card popCard() {

if (!cards.isEmpty()) {

return cards.pop();

} else {

System.out.println("The pile is already empty");

return null;

}

}

public Card peekCard() {

if (!cards.isEmpty()) {

return cards.peek();

} else {

System.out.println("The pile is already empty");

return null;

}

}

}

class Trial

{

public static void main(String[] args)

{

Pile pile = new Pile();

Scanner sc = new Scanner(System.in);

System.out.println("Mention number of cards:");

int n = sc.nextInt();

System.out.println("Mention Card suit and value as 'Suit Value':");

for(int i=0;i<=n;i++)

{

String cardsuit1 = sc.nextLine();

String cardval1 = sc.nextLine();

Card card1 = new Card(cardsuit1, cardval1);

pile.pushCard(card1);

}

System.out.println("Cards in pile:");

for (Card card : pile.cards)

{

System.out.println(card.toString());

}

do{

System.out.println("1. Pop 2.Peek 3.Push:");

int task = sc.nextInt();

if(task==1)

{

System.out.println("Drawing a card from pile:");

Card drawnCard = pile.popCard();

System.out.println("Drawn card: " + drawnCard.toString());

}

else if(task==2)

{

System.out.println("Peeking at top card in pile:");

Card topCard = pile.peekCard();

System.out.println("Top card: " + topCard.toString());

}

else if(task==3)

{

String inputline2 = sc.nextLine();

String[] cardarr2 = inputline2.split(" ");

Card card2 = new Card(cardarr2[0], cardarr2[1]);

pile.pushCard(card2);

System.out.println("Cards in pile:");

for (Card card : pile.cards)

{

System.out.println(card.toString());

}

}

}

}

}