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CSA0914 - java programming.

Assignment - 1

1. Student grading system :-

```
import java.util.Scanner;
public class studentgradingSystem{
    public static void main(String[]args){
        Scanner scanner = new Scanner(System.in);
        char choice;
        do{
            System.out.print("enter student's score: ");
            int score = scanner.nextInt();
            char grade;
            if (score >=90){
                grade = 'A';
            }else if (score >=80){
                grade = 'B';
            }else if (score >=70){
                grade = 'C';
            }else if (score >=60){
                grade = 'D';
            }else{
                grade = 'F';
            }
        System.out.println("Grade:" +grade);
        System.out.print("Do you enter another score ? Y/N:");
        choice = scanner.next().charAt(0);
        }while (choice =='y'||choice =='N');
        scanner.close();
}
}
```

Output :-

Input : 85

output : Grade B.

2. Number guessing game:-

```
import java.util.Scanner;
import java.util.Random;
public class NumberGuessingGame{
    public static void main(String[] args){
        Scanner scanner = new Scanner(System.in)
        Random random = new Random();
        char playAgain;
        do{
            int randomNumber = random.nextInt(10)+1;
            boolean guessedCorrectly = false;
            System.out.print("Guess number blw 1 to 10. you
                                have 3 attempts ");
            for(int i=1; i<=3; i++){
                System.out.print("Attempt " + i + ": ");
                int guess = Scanner.nextInt();
                if (guess == randomNumber){
                    system.out.println("correct! "+i+" attempts."
                    guessedCorrectly=true;
                    break;
                }else if (guess< randomNumber){
                    system.out.println("Too low.");
                } else {
                    system.out.println("To high.");
                }
            if(!guess correctly){
                system.out.println("Sorry! correct is:" +
                                    randomNumber)
}
```

```
        System.out.print("Do you want to play again?,(Y/N):");
        playAgain = scanner.next().charAt(0);
    } while (playAgain == 'y' || playAgain == 'Y');
        scanner.close();
    }
}
```

output :-

Random Number = 7

Player inputs = 5, 8, 7

output :- "Too low", "Too high", correct ! 3 attempts.

3. Multiplication table :-

```
import java.util.Scanner;
public class MultiplicationTable {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter the range:");
        int range = scanner.nextInt();
        System.out.print("enter number:");
        int number = scanner.nextInt();
        for (int i=1; i<=range; i++) {
            System.out.println(number + "*" + i + "=" +
                                (number*i));
    }
    scanner.close();
}
}
```

output :-

Input n = 5

range = 3

5 x 1 = 5

5 x 2 = 10

5 x 3 = 15

4. Even or odd number counter :-

```
import java.util.scanner;
public class Evenoddcounter{
    public static void main (string[] args){
        scanner scanner = new scanner(system.in);
        system.out.println("Enter the number of elements: ");
        int n = scanner.nextint();
        int[] numbers = new int[n];
        system.out.println("enter the element: ");
        for (int i=0; i<n; i++){
            numbers[i] = scanner.nextint();
    }
    int evencout = 0;
    int oddcout = 0;
    int evensum = 0;
    int oddsum = 0;
for (int number : numbers){
        if (number % 2 == 0){
            evencount++;
            evensum += number;
        } else{
            oddcount++;
            oddsum += number;
    }
}
system.out.println(evencount);
system.out.println(oddcount);
system.out.print(evensum);
system.out.println(oddsum);
    scanner.close();
}
}
```

output :-

input : {2,3,4,5,6}

even count : 3

even sum : 12

odd count : 2

odd sum : 8

5. Simple ATM Simulation :-

```
import java.util.Scanner;
public class ATMSimulation {
    public static void main(String[] args){
    Scanner scanner =new Scanner(System.in);
    int balance =1000;
    int choice;
do {
  System.out.println("ATM menu;");
  System.out.println("1.check Balance:");
  System.out.println("2.Deposit money:");
  System.out.println("3.withdraw money");
  System.out.println("4.exit");
  System.out.println("choose an option:")
   choice =scanner.nextInt();
  switch(choice){
      case 1:
         System.out.println(balance);
         break;
      case 2:
         System.out.println("Deposit amount:")
      if (deposit>0) {
           balance +=deposit;
        System.out.println(deposit);
```

```
} else {
    system.out.println("Invalid");
}
  break;
case 3:
    system.out.println("withdraw amount:");
     int withdraw = scanner.nextInt();
     if (withdraw > balance) {
            system.out.println("error");
     } else {
        system.out.println('withdraw');
     }
     break;
case 4:
      system.out.println("Thank you!");
      break;
    default:
        system.out.print("Invalid");
}
} while (choice != 4);
      scanner.close();
  }
}
```

output:-

Intial balance = 1000

Deposit = 200

withdraw = 150

Balance = 1050.