**EXP 3**

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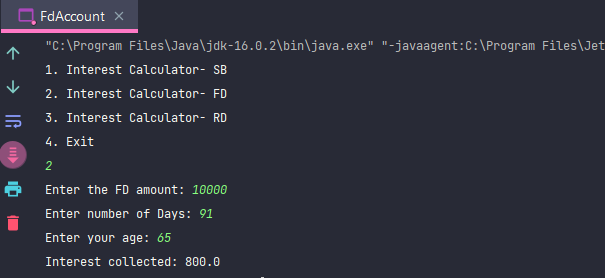
**SUB – PBLJ**

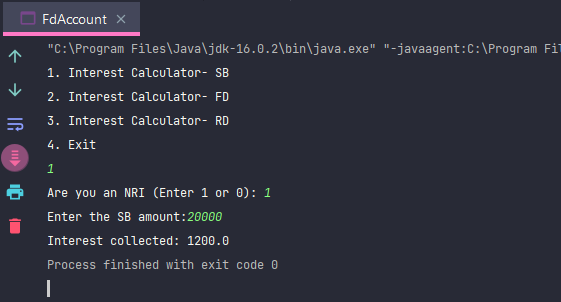
**Q) Create a application to calculate interest for FDs, RDs based on certain conditions using inheritance.**

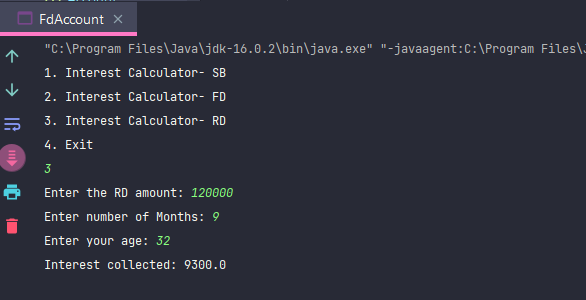
**CODE)**

package regiment;  
  
import java.util.Scanner;  
  
class FdAccount extends *Account*{  
 double interestRate;  
 double amount;  
 int noOfDays;  
 int ageOfAcHolder;  
 double calculateInterest(){  
 if (amount<10000000){  
 if (ageOfAcHolder>60){  
 if (noOfDays>=7 && noOfDays<=14 ){  
 interestRate = 5.0;  
 }  
 else if (noOfDays>=15 && noOfDays<=29 ){  
 interestRate = 5.25;  
 }  
 else if (noOfDays>=30 && noOfDays<=45 ){  
 interestRate = 6.0;  
 }  
 else if (noOfDays>46 && noOfDays<=60 ){  
 interestRate = 7.50;  
 }  
 else if (noOfDays>=61 && noOfDays<=184 ){  
 interestRate = 8.0;  
 }  
 else if (noOfDays>=184 && noOfDays<=365 ){  
 interestRate = 8.5;  
 }  
 }else{  
 if (noOfDays>=7 && noOfDays<=14 ){  
 interestRate = 4.50;  
 }  
 else if (noOfDays>=15 && noOfDays<=29 ){  
 interestRate = 4.75;  
 }  
 else if (noOfDays>=30 && noOfDays<=45 ){  
 interestRate = 5.50;  
 }  
 else if (noOfDays>46 && noOfDays<=60 ){  
 interestRate = 7.00;  
 }  
 else if (noOfDays>=61 && noOfDays<=184 ){  
 interestRate = 7.50;  
 }  
 else if (noOfDays>=184 && noOfDays<=365 ){  
 interestRate = 8.0;  
 }  
 }  
 }  
 else if(amount>10000000){  
 if (noOfDays>=7 && noOfDays<=14 ){  
 interestRate = 6.50;  
 }  
 else if (noOfDays>=15 && noOfDays<=29 ){  
 interestRate = 6.75;  
 }  
 else if (noOfDays>=30 && noOfDays<=45 ){  
 interestRate = 6.75;  
 }  
 else if (noOfDays>46 && noOfDays<=60 ){  
 interestRate = 8.0;  
 }  
 else if (noOfDays>=61 && noOfDays<=184 ){  
 interestRate = 8.50;  
 }  
 else if (noOfDays>=184 && noOfDays<=365 ){  
 interestRate = 10.0;  
 }  
 }  
 return (interestRate\*amount)/100d;  
  
 }  
 }  
  
class SbAccount extends *Account*{  
 double interestRate;  
 double amount;  
 int status;  
 double calculateInterest(){  
 if(status==1){  
 interestRate=6;  
 }  
 else if(status==0){  
 interestRate=4;  
 }else{  
 System.*out*.println("Enter Valid choice of Account Status.");  
 }  
 return (interestRate\*amount)/100;  
 }  
  
}  
  
class RdAccount extends *Account*{  
 double interestRate;  
 double amount;  
 int noOfMonths;  
 int ageOfACHolder;  
 int monthlyAmount;  
 double calculateInterest(){  
 if (ageOfACHolder<60){  
 if (noOfMonths==6){  
 interestRate = 7.50;  
 }  
 else if (noOfMonths==9){  
 interestRate = 7.75;  
 }  
 else if (noOfMonths==12){  
 interestRate = 8.00;  
 }  
 else if (noOfMonths==15){  
 interestRate = 8.25;  
 }  
 else if (noOfMonths==918){  
 interestRate = 8.50;  
 }  
 else if (noOfMonths==21){  
 interestRate = 8.75;  
 }  
 else {  
 System.*out*.println("Entered number of month does not provide you interest");  
 return 0;  
 }  
 }  
 else if(ageOfACHolder>=60){  
 if (noOfMonths==6){  
 interestRate = 8.00;  
 }  
 else if (noOfMonths==9){  
 interestRate = 8.25;  
 }  
 else if (noOfMonths==12){  
 interestRate = 8.50;  
 }  
 else if (noOfMonths==15){  
 interestRate = 8.75;  
 }  
 else if (noOfMonths==18){  
 interestRate = 9.00;  
 }  
 else if (noOfMonths==21){  
 interestRate = 9.25;  
 }  
 else {  
 System.*out*.println("Entered number of month does not provide you interest");  
 return 0;  
 }  
  
 }  
 return (interestRate\*amount)/100d;  
 }  
}  
  
public abstract class *Account* {  
 double interest;  
 double amount;  
 double calculateInterest(){  
 System.*out*.println();  
 return 2.3;  
 }  
  
 public static void main(String[] *args*) {  
 System.*out*.println("1. Interest Calculator- SB");  
 System.*out*.println("2. Interest Calculator- FD");  
 System.*out*.println("3. Interest Calculator- RD");  
 System.*out*.println("4. Exit");  
  
 Scanner sc = new Scanner(System.*in*);  
 int choice = sc.nextInt();  
 FdAccount adc = new FdAccount();  
 SbAccount sba = new SbAccount();  
 RdAccount rda = new RdAccount();  
 switch (choice){  
 case 2:  
 System.*out*.print("Enter the FD amount: ");  
 int amt = sc.nextInt();  
 adc.amount=amt;  
 System.*out*.print("Enter number of Days: ");  
 int days = sc.nextInt();  
 adc.noOfDays=days;  
 System.*out*.print("Enter your age: ");  
 int ag = sc.nextInt();  
 adc.ageOfAcHolder=ag;  
 System.*out*.println("Interest collected: "+adc.calculateInterest());  
 break;  
 case 1:  
 System.*out*.print("Are you an NRI (Enter 1 or 0): ");  
 int status = sc.nextInt();  
 sba.status=status;  
 System.*out*.print("Enter the SB amount:");  
 int amnt = sc.nextInt();  
 sba.amount=amnt;  
 System.*out*.print("Interest collected: "+sba.calculateInterest());  
 break;  
 case 3:  
 System.*out*.print("Enter the RD amount: ");  
 int amut = sc.nextInt();  
 rda.amount=amut;  
 System.*out*.print("Enter number of Months: ");  
 int mon = sc.nextInt();  
 rda.noOfMonths=mon;  
 System.*out*.print("Enter your age: ");  
 int age = sc.nextInt();  
 rda.ageOfACHolder=age;  
 System.*out*.println("Interest collected: "+rda.calculateInterest());  
 break;  
 case 4:  
 break;  
 }  
  
 }  
}

**OUTPUT)**

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