WEEK 8

```
import java.util.Scanner;
import java.lang.Math;

class Account
{
Scanner ss=new Scanner(System.in);
String acc_name;
String acc_no;
int acc_type;
double balance;

void CreateAccount()
{
System.out.println("Enter the Deals of the new account: ");
System.out.printf("Name: ");
acc_name=ss.next();
System.out.printf("Ideal Account number: ");
acc_no=ss.next();
if(acc_type==1)
{
System.out.printf("Enter the first Deposite Value: ");
balance=ss.nextDouble();
System.out.println("Thank you for creating an Account.");
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}
else
{
System.out.println("Enter the first Deposite Value(above 5000): ");
balance=ss.nextDouble();
System.out.println("Thank you for creating an Account.\nYou will shortly
receive your Cheque Book.");
        }
    }

String getAccountNo()
{
return acc_no;
    }

void Display()
{
System.out.println("The Account Details are given as follows: ");
System.out.println("Name: "+acc_name);
System.out.println("Account Number: "+acc_no);
if(acc_type==1)
System.out.println("Account Type: Savings Account");
else
System.out.println("Account Type: Current Account");
System.out.println("Balance: "+balance);
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}
}

class Sav_Acct extends Account
{
void withdraw()
{
double amount;
System.out.println("Enter the Amount to be withdrawn: ");
amount=ss.nextDouble();
balance-=amount;
    }

void deposite()
{
double amount;
System.out.println("Enter the Amount to be Deposited: ");
amount=ss.nextDouble();
balance+=amount;
    }
void compound_interest()
{
byte years_of_dep;
double interest;
System.out.println("Enter the number of years for compound interest: ");
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years_of_dep=ss.nextByte();
interest=(balance*Math.pow(1+(4.5/100),years_of_dep))-balance;
System.out.println("The Compound interest is: "+interest);

    }
}


class Curr_Acct extends Account
{
void withdraw()
{
double amount;
System.out.println("Warning: A minimum of 5000 balance must be
maintained\n\tIf failed, a penalty of Rs.100 will be imposed.");
System.out.println("Enter the Amount to be withdrawn: ");
amount=ss.nextDouble();
balance-=amount;
penaltycheck();
    }

void deposite()
{
double amount;
System.out.println("Enter the Amount to be Deposited: ");
```

```
amount=ss.nextDouble();
balance+=amount;
    }

void penaltycheck()
{
if(balance<5000)
{
int pen=100;
System.out.println("The balance is less than 5000 a penalty of Rs.100 is
imposed.");
balance-=pen;
        }
    }
}


class Bank
{
public static void main(String args[])
{
Sav_Acct S_acct[]=new Sav_Acct[10];
Curr_Acct C_acct[]=new Curr_Acct[10];
Scanner ss=new Scanner(System.in);
String acctno;
```

```
int ch,i=0,j=0;
while(true)
{
System.out.println("Welcome to the bank.\n");
System.out.println("Enter the action to be performed:");
System.out.println("1: Create a Savings Account\n2: Create a Current
Account");
System.out.println("3: Deposite \n4: Withdraw\n5:Display Balance\n6:
Check Compound Interest");
System.out.printf("Enter your choice: ");
ch=ss.nextInt();
switch(ch)
{
case 1: S_acct[i]=new Sav_Acct();
S_acct[i].acc_type=1;
S_acct[i].CreateAccount();
i++;
break;

case 2: C_acct[j]=new Curr_Acct();
C_acct[j].acc_type=2;
C_acct[j].CreateAccount();
j++;
break;
```

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case 3: System.out.println("Enter the account number: ");
acctno=ss.next();
for(int k=0;k {
if(acctno.equals(C_acct[k].getAccountNo()))
{
System.out.println("This Account is a Current Account.");
C_acct[k].deposite();
                    }
                }
for(int k=0;k {
if(acctno.equals(S_acct[k].getAccountNo()))
{
System.out.println("This Account is a Savings Account.");
S_acct[k].deposite();
                    }
                }
break;

case 4: System.out.println("Enter the account number: ");
acctno=ss.next();
for(int k=0;k {
if(acctno.equals(C_acct[k].getAccountNo()))
{
System.out.println("This Account is a Current Account.");
C_acct[k].withdraw();
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}
            }
for(int k=0;k {
if(acctno.equals(S_acct[k].getAccountNo()))
{
System.out.println("This Account is a Savings Account.");
S_acct[k].withdraw();
                }
            }
break;

case 5: System.out.println("Enter the account number: ");
acctno=ss.next();
for(int k=0;k {
if(acctno.equals(C_acct[k].getAccountNo()))
C_acct[k].Display();
                    }
for(int k=0;k {
if(acctno.equals(S_acct[k].getAccountNo()))
S_acct[k].Display();
                    }
break;
case 6: System.out.println("Enter the account number: ");
acctno=ss.next();
for(int k=0;k {
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if(acctno.equals(C_acct[k].getAccountNo()))
System.out.println("This is a Current account  \nThis account does not
provide interest.");
                    }
for(int k=0;k {
if(acctno.equals(S_acct[k].getAccountNo()))
S_acct[k].compound_interest();
                    }
break;
        }
    }
    }
}
```