

1)Write a C program for a ATM

```
#include<stdio.h>
static int count;
typedef struct bank
{
    long int accnum;
    int code;
    double savings_bal;
    double current_bal;
    double demat_bal;
}Bank;
void newcustomer(Bank data[])
{ long int accnum=0;
  int code=0;
  printf("\nNEW CUSTOMER REGISTRARION");
  printf("\nEnter a 10 digit number:");
  getchar();
  scanf("%ld",&data[count].accnum);
  getchar();
  printf("\nEnter a your password:");
  scanf("%d",&data[count].code);
  count++;
  printf("%d",count);
  printf("%ld",data[count-1].accnum);
}
void checkbal(Bank data[],long int accnum )
{
    printf("\n THE BALANCE:");
    for(int i=0;i<=count;i++)
    {
        if(data[i].accnum==accnum)
        {
            printf("\nSavings account balance: %lf",data[i].savings_bal);
            printf("\nCurrent account balance: %lf",data[i].current_bal);
            printf("\nDemat account balance: %lf",data[i].demat_bal);
            return;
        }
    }
}
void depositcash(Bank data[],long int accnum)
{
    double cash;
    int option;
    printf("\nDEPOSITING CASH\nEnter the amount to be deposited:");
    scanf("%lf",&cash);
    printf("\nIn which account you want to deposit\n1)Savings\n2)Current\n3)Demat\nPress any one option:");
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scanf("%d",&option);
if(option==1)
{
    for(int i=0;i<=count;i++)
    { printf("%ld",data[i].accnum);
      if(data[i].accnum==accnum)
      {
          data[i].savings_bal+=cash;
          printf("The amount %lf is deposited and the balance is
%lf",cash,data[i].savings_bal);
      }
    }
}
else if(option==2)
{
    for(int i=0;i<=count;i++)
    {
        if(data[i].accnum==accnum)
        {
            data[i].current_bal+=cash;
            printf("The amount %lf is deposited and the balance is
%lf",cash,data[i].current_bal);
        }
    }
}
else if(option==3)
{
    for(int i=0;i<=count;i++)
    {
        if(data[i].accnum==accnum)
        {
            data[i].demat_bal+=cash;
            printf("The amount %lf is deposited and the balance is
%lf",cash,data[i].demat_bal);
        }
    }
}
else
{
    printf("Enter a valid option.");
}

}

void withdrawcash(Bank data[],long int accnum)
{
    double cash;
    int option;

```

```

printf("\nWITHDRAWING CASH\nEnter the amount to be withdrawn:");
scanf("%lf",&cash);

printf("\nFrom which account you want to
withdraw\n1)Savings\n2)Current\n3)Demat\nPress any one option:");
scanf("%d",&option);
if(option==1)
{
    for(int i=0;i<=count;i++)
    {
        if(data[i].accnum==accnum)
        {
            if(data[i].savings_bal>=cash)
            {
                data[i].savings_bal-=cash;
                printf("The amount %lf is withdrawn and the balance is
%lf",cash,data[i].savings_bal);
                return;
            }
            else
            {
                printf("Not enough cash");
                return;
            }
        }
    }
}
else if(option==2)
{
    for(int i=0;i<=count;i++)
    {
        if(data[i].accnum==accnum)
        {
            if(data[i].current_bal>=cash)
            {
                data[i].current_bal-=cash;
                printf("The amount %lf is withdrawn and the balance is
%lf",cash,data[i].current_bal);
                return;
            }
            else
            {
                printf("Not enough cash");
                return;
            }
        }
    }
}
}

```

```

else if(option==3)
{
    for(int i=0;i<=count;i++)
    {if(data[i].accnum==accnum)
    {
        if(data[i].demat_bal>=cash)
        {
            data[i].demat_bal-=cash;
            printf("The amount %lf is withdrawn and the balance is
%lf",cash,data[i].demat_bal);
            return;
        }
        else
        {
            printf("Not enough cash");
            return;
        }
    }
    }
}
else
{
    printf("Enter a valid option.");
}
}

void benefits()
{
    printf("In savings account: interest provided is 4 percent for normal savings
account\ninterest provided is 8 percent for farmer savings account \ninterest provided is 7.5
percent for women account\n");
    printf("In current account: Unlimited transcatons per day\n minimum balance is just 25000
rupees\n");
}

int main()
{
    Bank data[100];
    long int accnum;
    int option,flag=0,code=0;
    char customer_check;
    printf("Are you a new customer\nPress Y if yes or N if no:");
    scanf("%c",&customer_check);
    if(customer_check=='Y')
    {
        newcustomer(data);
    }
}

```

```

}

do
{
printf("\n***Welcome to YOUR BANK***");
printf("\nEnter your account number:");
scanf("%ld",&accnum);
printf("\nEnter a your password:");
scanf("%d",&code);
for(int i=0;i<count;i++)
{
    if(data[i].accnum==accnum)
    {
        if(data[i].code==code)
        {
            flag=1;
            break;
        }
    }
}
if(flag!=1)
{
    printf("Account number or the password is incorrect ");
    return 0;
}
printf("\nList of available operations:");
printf("\n1) Check balance.\n2) Deposit cash.\n3) Withdraw cash.\n4) Benefits.\n5)
EXIT!!\n");
printf("Press any one of the option.");
getchar();
scanf("%d",&option);
switch(option)
{
    case 1:checkbal(data,accnum);
    break;
    case 2:depositcash(data,accnum);
    break;
    case 3: withdrawcash(data,accnum);
    break;
    case 4:benefits();
    break;

    case 5: break;
    default: printf("Press a valid key!!!");
}
}

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    }while(option!=5);
    return 0;
}

```

2) Write a C program for Full pyramid, Inverted full pyramid, and Half pyramid:

```
#include<stdio.h>
```

```

void fullpyramid(int n)
{
    printf("Full pyramid:\n");
    int i,j=0;
    for(i=1;i<=n;i++)
    {
        j=1;
        while(j<=(2*n-1))
        {
            if(j>= n-(i-1) && j<=n+(i-1))
                printf("*");
            else
                printf(" ");
            j++;
        }
        printf("\n");
    }
}

```

```

}
void invfullpyramid(int n)
{
    printf("Inverted Full pyramid:\n");
    int i,j=0;
    for(i=n;i>=1;i--)
    {
        j=1;
        while(j<=(2*n-1))
        {
            if(j>= n-(i-1) && j<=n+(i-1))
                printf("*");
            else
                printf(" ");
            j++;
        }
        printf("\n");
    }
}

```

```

}
void halfpyramid(int n)
{
    printf("Half pyramid:\n");
    int i,j;
}

```

```
    for(i=0;i<n;i++)
    {
        for(j=0;j<=i;j++)
        {
            printf("* ");
        }
        printf("\n");
    }
}
int main()
{
    int n;
    printf("Enter the no of rows:");
    scanf("%d",&n);
    fullpyramid(n);
    invfullpyramid(n);
    halfpyramid(n);
    return 0;
}
```