**BANKING ENQUIRY CHATBOT**

#include<stdio.h>

#include<math.h>

void statement()

{

printf("\033[0;36m");

printf("\nThe customer identification will be on the basis of documents provided by the customer. The customer has to submit the prescribed application form along with:\n(a)Permanent Account Number (PAN);\n(b) Photograph; and\n(c) At least one copy of the Officially Valid Documents (OVD’s)/equivalent e-document of OVD’s mentioned below, as proof of his identity and address. Passport,\nDriving Licence,\nProof of possession of Aadhaar Number,\nVoter's Identity Card issued by Election Commission of India,\nJob card issued by NREGA duly signed by an officer of the State Government,\nLetter issued by the National Population Register containing details of name and address.\n");

}

float calculate\_EMI(float amt, float ir, float mo) //Function declared for House loan

{

float emi;

ir = ir / (12 \* 100); //one month interest

emi = (amt \* ir \* pow(1 + ir, mo)) / (pow(1 + ir, mo) - 1);

return (emi);

}

float calculate\_EMI1(float amt1, float ir1, float mo1) //Function declared for Vehicle loan

{

float emi1;

ir1 = ir1 / (12 \* 100); //one month interest

emi1 = (amt1 \* ir1 \* pow(1 + ir1, mo1)) / (pow(1 + ir1, mo1) - 1);

return (emi1);

}

struct cust

{

char name[20];

long int phno;

char location[20];

}c;

void fun()

{

char ec,ld,lo,sc; //Varibles declared to know customer preference

int au;

printf("\033[0;37m");

printf("\nWould you like to know about any things? (y|Y-Yes; n|N-No)\n");

scanf("%s",&ec);

if(ec=='y')

goto first; //Entry label

else

goto last; //Exit label

int i; //for loop

float r,tt,si,ci,p,t; //Used in simple int. & compound int.

int ot[1000],interest[1000],prin[1000],at[1000]; //Used in loan

float tp,amt,ir,mo,emi,salary,sr; //Used in House loan

float amt1,ir1,mo1,emi1,sr1; //Used in Vehicle loan

first: //Entry label

printf("\033[0;32m");

printf("\nType e|E - about us, l|L - Loan, f|F - Fixed deposit, d|D - Create an account\n");

scanf("%s",&ld);

if(ld=='d'||ld=='D')

{

printf("\033[0;36m");

printf("A SAVINGS ACCOUNT is a basic type of bank account that allows you to deposit money.\nYou can withdraw your money from it, and most banks pay compunding interest on the balance of these accounts.\nThe purpose of a savings account is to provide a safe place to stash the money you're not using for regular expenditures.\n" );

printf("\nA CURRENT ACCOUNT also known as financial account is a type of deposit account maintained solely or jointly for carrying out large value transactions on a regular basis.\nCurrent Accounts relate to liquid deposits and unlike Savings Account, it does not provide interests.\nCurrent Accounts are primarily opened by businessmen such as proprietors , partnership firms, trust, association of persons, public and private companies etc.\n");

printf("\033[0;32m");

printf("\nTYPE s|S - Savings account, c|C - Current account.\n");

scanf("%s",&sc);

if(sc=='s'||sc=='S')

{

printf("\033[0;37m");

printf("The interest rate our bank provide for savings account is 5 percentage.\n");

r=5;

printf("\033[0;35m");

printf("Enter the amount of money to be deposited: \n");

scanf("%f",&p);

printf("\033[0;35m");

printf("Enter a year for which you like to know the interest gained till that year: \n");

scanf("%f",&t);

tt=p\*(pow(1+(r/100),(t/12)));

ci=tt-p; // Above 2 lines indicate formula

printf("\033[0;33m");

printf("Interest till %.1f years is %.2f.\n",t,ci);

printf("Total amount at the end of %.1f years is %.2f.\n",t,tt);

printf("\033[0;31m");

printf("Are you interested in opening a savings bank account?\n Type: y|Y-Yes; n|N-No.");

scanf("%s",&sc);

if(sc=='y'||'Y')

{

printf("\033[0;34m");

for(i=0;i<168;i++)

printf("-");

statement();

printf("\nKindly visit our nearest branch.\n");

}

printf("\033[0;34m");

for(i=0;i<168;i++)

printf("-");

fun();

}

if(sc=='c'||sc=='C')

{

printf("\033[0;36m");

printf("BENEFITS OF CURRENT ACCOUNT:\n\*unlimited transactions\n\*no limits for deposits and withdrawal\n\*provides overdraft facilities to the customer\n\*best suited for business purpose\n");

printf("\033[0;31m");

printf("Are you interested in opening a current bank account?\n Type: y|Y-Yes; n|N-No.");

scanf("%s",&sc);

if(sc=='y'||'Y')

{

printf("\033[0;34m");

for(i=0;i<168;i++)

printf("-");

statement();

}

printf("\033[0;34m");

for(i=0;i<168;i++)

printf("-");

fun();

}

}

if(ld=='f'||ld=='F')

{

printf("\033[0;36m");

printf("Fixed deposit is a financial provision offered by banks and NBFCs where you can deposit a lump sum of money and yield a higher rate $

printf("\033[0;35m");

printf("\nEnter the amount of money to be deposited: \n");

scanf("%f",&p);

printf("\033[0;35m");

printf("Enter the period of time (In years- eg:0.5=6months): \n");

scanf("%f",&t);

if(t<=1)

{

printf("\033[0;37m");

printf("The interest rate our bank provide for savings account is 5.5 percentage.\n");

r=5.5;

si=(p\*t\*r)/100;

tt=si+p; //Above 2 lines indicate formula

printf("\033[0;33m");

printf("Interest till %.2f years is %.2f.\n",t,si);

printf("\033[0;33m");

printf("Total amount at the end of %.1f years is %.2f.\n",t,tt);

printf("\033[0;31m");

printf("Are you interested to invest in fixed deposit?\nType: y|Y-Yes; n|N-No.");

scanf("%s",&sc);

if(sc=='y'||sc=='Y')

{

printf("\033[0;34m");

for(i=0;i<168;i++)

printf("-");

statement();

}

printf("\033[0;34m");

for(i=0;i<168;i++)

printf("-");

fun();

}

else if(t>1)

{

printf("\033[0;37m");

printf("The interest rate our bank provide for savings account is 6 percentage.\n");

r=6;

tt=p\*(pow(1+(r/100),t));

ci=tt-p; //Above 2 lines indicate formula

printf("\033[0;33m");

printf("Interest till %f years is %f.\n",t,ci);

printf("\033[0;33m");

printf("Total amount at the end of %f years is %f.\n",t,tt);

printf("\033[0;31m");

printf("Are you interested to invest in fixed deposit?\nType: y|Y-Yes; n|N-No.");

scanf("%s",&sc);

if(sc=='y'||sc=='Y')

{

printf("\033[0;34m");

for(i=0;i<168;i++)

printf("-");

statement();

}

printf("\033[0;34m");

for(i=0;i<168;i++)

printf("-");

fun();

}

}

if(ld=='e'||ld=='E')

{

printf("\033[0;36m");

printf("Type 1-Vision and Mission. 2-About CEO's. 3-Our Brand Identity\n");

scanf("%d",&au);

if(au==1)

{

printf("\033[0;33m");

printf("Vision and Mission:\n \*Delivering excellence in financial services through customer focus, employee engagement and sustainable growth\*.\n\*Be responsive to the unique needs of every customer through all channels of choice\*\n\*Empower and engage our employees\* \n");

}

if(au==2)

{

printf("\033[0;33m");

printf("About CEO's: Two best friends from Ethiraj college and PSG College of Technology was clicked by an idea to open a bank. Yes. It's crazy. But believe us, it changed our lives forever. Follow your dreams. Give it a try. Failures are stepping stones for success. YOU MAY BECOME US ONEDAY! Have a great day. \n-ROOBAVAHINI & SNEHA \n");

}

if(au==3)

{

printf("\033[0;33m");

printf("Our Brand Identity:\nSome walk the path, few carve their journeys.\nSome follow rules, few challenge the status quo. At Bank of Marvel, we take pride in asking questions.\nWe have always made efforts to push boundaries by questioning the way things are done. In an industry governed by formulas, we ask ‘Aisa Kyun?’ Bank of MARVEL takes joy in doing small things ‘differently’, while following all norms, that make a positive difference to our customers banking experiences.\nIt is this ideology that seamlessly translates into our tagline ‘Badlaav Humse Hai’.\nAfter all, when you take the road less travelled, it makes all the difference! \n");

}

printf("\033[0;34m");

for(i=0;i<168;i++)

printf("-");

fun();

}

if(ld=='l'||ld=='L')

{

printf("\033[0;36m");

printf("Enter which type loan would you want: ");

printf("\033[0;32m");

printf("\nEnter V|v - Vehicle loan; H|h - House loan\n");

scanf("\n%s",&lo);

if(lo=='h'||lo=='H')

{

printf("\033[0;36m");

printf("Enter your salary per month: ");

scanf("%f",&salary);

printf("\033[0;36m");

printf("Enter the loan amount: \n");

scanf("%f",&amt);

printf("\033[0;36m");

printf("Enter loan tenure in months: \n");

scanf("%f",&mo);

ir = 7.5;

printf("\033[0;37m");

printf("Interest rate provided by our bank is 7.5 percentage pa.\n");

emi = calculate\_EMI(amt, ir, mo);//emi per yr

tp=emi\*mo;

printf("\033[0;33m");

printf("Monthly EMI is %.2f.\n", emi);

printf("\033[0;33m");

printf("Total payable is %.2f\n",tp);

sr=(salary/2);

if(emi>sr)

{

printf("\033[0;36m");

printf("\nYou are not eligible for the loan amount %f as the given emi>(salary/2)\n",amt);

//emi=amt\*r\*pow((1+r),mo)/(pow((1+r),mo)-1);

}

else

{

printf("\033[0;36m");

printf("\nMonth LoanAmt.\t EMI \t Principle\t Interest\t Outstanding bal.\n");

for(i=1;i<=mo;i++)

{

//interest=interest rate/12\*principle amt/100 //princple=emi-interest

at[i]=amt;

interest[i]=(ir/12)\*(at[i]/100);

prin[i]=emi-interest[i];

ot[i]=at[i]-prin[i];

printf("\033[0;37m");

printf("\n%d\t%d\t\t%.2f\t\t%d\t\t%d\t\t%d",i,at[i],emi,prin[i],interest[i],ot[i]);

amt=ot[i];

}

}

fun();

}

if(lo=='v'||lo=='V')

{

printf("\033[0;36m");

printf("Enter your salary per month: ");

scanf("%f",&salary);

printf("\033[0;36m");

printf("Enter the loan amount: \n");

scanf("%f",&amt1);

printf("\033[0;36m");

printf("Enter loan tenure in months: \n");

scanf("%f",&mo1);

ir1 = 9.5;

printf("\033[0;37m");

printf("Interest rate provided by our bank is 9.5 percentage pa.\n");

emi1 = calculate\_EMI1(amt1, ir1, mo1);//emi per yr

tp=emi1\*mo1;

printf("\033[0;36m");

printf("Monthly EMI is %.2f\n", emi1);

printf("\033[0;33m");

printf("Total payable is %.2f\n",tp);

//emi=amt\*r\*pow((1+r),mo)/(pow((1+r),mo)-1);

sr1=(salary/2);

if(emi1>sr1)

{

printf("\033[0;36m");

printf("\nYou are not eligible for the loan amount %f as the given emi>(salary/2)\n",amt1);

}

else

{

printf("\033[0;36m");

printf("\nMonth LoanAmt.\t EMI \t Principle\t Interest\t Outstanding bal.\n");

for(i=1;i<=mo1;i++)

{

//interest=interest rate/12\*principle amt/100 //princple=emi-interest

at[i]=amt1;

interest[i]=(ir1/12)\*(at[i]/100);

prin[i]=emi1-interest[i];

ot[i]=at[i]-prin[i];

printf("\033[0;37m");

printf("\n%d\t%d\t\t%.2f\t%d\t\t%d\t\t%d",i,at[i],emi1,prin[i],interest[i],ot[i]);

amt1=ot[i];

}

}

fun();

}

}

last: //Exit label

printf("\nThank you! Visit our nearest branch!");

}

int main()

{

int i,id[10];

char lg,pass[20];

//char word[10]={'B','e','s','t'};

char word[10]="best";

char retry;

for(i=0;i<168;i++)

printf("-");

printf("\033[0;35m");

printf("\n\t\tWELCOME TO BANK OF MARVEL \n");

printf("\033[0;33m");

printf("\t\t\U0001F600 \U0001F600 \U0001F600 \U0001F600 \U0001F600 \U0001F600 \U0001F600\n");

printf("\033[0;32m");

printf("Hi! I AM GROOT >,<. Welcome to Bank of Marvel. I'm your virtual assistant, here to assist you with all your banking queries 24x7.\n");

printf("\nPlease select an option\n");

printf("\033[0;34m");

for(i=0;i<168;i++)

printf("-");

printf("\033[0;35m");

printf("\n------------LOGIN------------\n A|a - Admin / C|c - Customer\n");

scanf("%s",&lg);

if(lg=='a'||lg=='A')

{

printf("\033[0;36m");

printf("Enter your id:\n");

scanf("%d",&id);

printf("Enter your password:\n");

retry:

printf("\033[0;36m");

scanf("%s",pass);

printf("\033[0;37m");

if(strcmp(pass,word)==0)

{

FILE \*fp;

fp=fopen("cd4.txt","r");

if (fp == NULL)

{

printf("\033[0;31m");

printf("File does not exists \n");

return 0;

}

while(fread(&c,sizeof(struct cust),1,fp))

{

printf("\033[0;36m");

printf("Name: %s\t Phoneno.: %ld\t Location: %s\t\n",c.name,c.phno,c.location);

}

fclose(fp);

}

else

{

printf("\033[0;33m");

printf("-----Retry password----\n");

goto retry;

}

}

if(lg=='c'||lg=='C')

{

printf("Enter your name:\n");

scanf("%s",c.name);

printf("Enter Your Phone number: \n");

scanf("%ld",&c.phno);

printf("Enter your current location:\n");

scanf("%s",c.location);

FILE \*fp;

fp=fopen("cd4.txt","a");

if (fp == NULL)

{

printf("File does not exists \n");

return 0;

}

fwrite(&c,sizeof(struct cust),1,fp);

fclose(fp);

fun();

}

return 0;

}