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1  /*Program: Banking System In C
2     Programmer: Jirro Reoloso
3     Course, Year & Section: BSCS 1-2
4     */
5
6
7  #include <stdio.h>
8  #include <string.h>
9  #include <conio.h>
10 #include <stdlib.h>
11 #include <windows.h>
12 #include <dir.h>
13 #include <limits.h>
14 #include <sys/time.h>
15 #include <ctype.h>
16
17 struct credentials{
18     char accnum[10];
19     char accname[50];
20     char accpass[15];
21     char accphone[15];
22     char acchashedpass[15];
23     float accbalance;
24 }user[50];
25
26 int z=0;
27 char adminpass[15] = "admin";
28 char tellerpass[15] = "teller";
29 char masterpass[15] = "jirro";
30 char uname[15];
31
32 char dirName[261];
33 char *prefix = "Transaction Records";
34
35 COORD coord = {0,0}; //set the coordinate to 0, 0 (top-left corner of window);
36 void gotoxy(int x, int y){
37     coord.X = x; coord.Y = y; // X and Y coordinates
38     SetConsoleCursorPosition(GetStdHandle(STD_OUTPUT_HANDLE), coord);
39 }
40 //This will set the foreground color for printing in a console window.
41 void SetColor(int ForgC){
42     WORD wColor;
43     //We will need this handle to get the current background attribute
44     HANDLE hStdOut = GetStdHandle(STD_OUTPUT_HANDLE);
45     CONSOLE_SCREEN_BUFFER_INFO csbi;
46
47     //We use csbi for the wAttributes word.
48     if(GetConsoleScreenBufferInfo(hStdOut, &csbi))
49     {
50         //Mask out all but the background attribute, and add in the foreground
51         wColor = (csbi.wAttributes & 0xF0) + (ForgC & 0x0F);
52         SetConsoleTextAttribute(hStdOut, wColor);
53     }
54     return;
55 }
56 void ClearConsoleToColors(int ForgC, int BackC){
57     WORD wColor = ((BackC & 0x0F) << 4) + (ForgC & 0x0F);
58     //Get the handle to the current output buffer...
59     HANDLE hStdOut = GetStdHandle(STD_OUTPUT_HANDLE);
60     //This is used to reset the carat/cursor to the top left.
61     COORD coord = {0, 0};
62     //A return value... indicating how many chars were written
63     // not used but we need to capture this since it will be
64     // written anyway (passing NULL causes an access violation).
65     DWORD count;

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66     ///This is a structure containing all of the console info
67     /// it is used here to find the size of the console.
68     CONSOLE_SCREEN_BUFFER_INFO csbi;
69     ///Here we will set the current color
70     SetConsoleTextAttribute(hStdOut, wColor);
71     if(GetConsoleScreenBufferInfo(hStdOut, &csbi))
72     {
73         ///This fills the buffer with a given character (in this case 32=space).
74         FillConsoleOutputCharacter(hStdOut, (TCHAR) 32, csbi.dwSize.X * csbi.
dwSize.Y, coord, &count);
75         FillConsoleOutputAttribute(hStdOut, csbi.wAttributes, csbi.dwSize.X *
csbi.dwSize.Y, coord, &count );
76         ///This will set our cursor position for the next print statement.
77         SetConsoleCursorPosition(hStdOut, coord);
78     }
79     return;
80 }
81 void SetColorAndBackground(int ForgC, int BackC){
82     WORD wColor = ((BackC & 0x0F) << 4) + (ForgC & 0x0F);;
83     SetConsoleTextAttribute(GetStdHandle(STD_OUTPUT_HANDLE), wColor);
84     return;
85 }
86 void drawRectangle(){
87     int i, j;
88     gotoxy(0,0);
89     printf("%c",201);
90     for(i = 1; i < 78; i++){
91         gotoxy(i, 0);
92         printf("%c",205);
93     }
94     gotoxy(78,0);
95     printf("%c",187);
96     for(i = 1; i < 25; i++){
97         gotoxy(78, i);
98         if(i == 6){
99             printf("%c",185);
100         }else{
101             printf("%c",186);
102         }
103     }
104     gotoxy(78, 25);
105     printf("%c",188);
106     for(i = 77; i > 0; i--){
107         gotoxy(i,25);
108         if(i == 35){
109             printf("%c",202);
110         }else{
111             printf("%c",205);
112         }
113     }
114     gotoxy(0,25);
115     printf("%c",200);
116     for(i = 24; i > 0; i--){
117         gotoxy(0,i);
118         if(i == 6){
119             printf("%c",204);
120         }else{
121             printf("%c",186);
122         }
123     }
124
125     for(i = 1; i < 78; i++){
126         gotoxy(i,6);
127         if(i == 35){
128             printf("%c",203);
129         }else{

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130         printf("%c",205);
131     }
132 }
133
134 for(i = 7; i < 25; i++){
135     gotoxy(35,i);
136     printf("%c",186);
137 }
138 }
139 void clearWindow(){
140     int i,j;
141     for(i = 37; i < 78; i++){
142         for(j = 7; j < 25; j++){
143             gotoxy(i,j);printf(" ");
144         }
145     }
146     return;
147 }
148 void window(){
149     drawRectangle();
150     gotoxy(28,2);
151     SetColor(3);
152     printf("Finals Banking System");
153     gotoxy(31,3);
154     printf("Jirro, BSCS 1-2");
155     gotoxy(33,4);
156     printf("[LIVE] v2.2");
157     gotoxy(25,24);
158     SetColor(17);
159 }
160 void printheadng(const char st[]){
161     SetColorAndBackground(0,15);
162     gotoxy(45,8);printf("Operation : %s",st);
163     SetColorAndBackground(17,15);
164 }
165 char* cap(char string[]){
166     int i;
167     int x = strlen(string); // You want to get the length of the whole string.
168     for (i=0;i<x;i++){
169         if (i==0&&string[i]>='a'&&string[i]<='z' || isalpha(string[i]) && string[i-1
] == ' '){
170             // only first letters of a word.
171             string[i]= toupper(string[i]);
172         }
173     }
174
175     return string;
176 }
177
178
179 void adduser(){
180     time_t rawtime;
181     struct tm * timeinfo;
182     time ( &rawtime );
183     timeinfo = localtime ( &rawtime );
184     int print = 37,x=0,isFound=0,i=0;
185     char buf1[0x100], buf2[0x100];
186     char admincheck[15];
187     clearWindow();
188     printheadng("Add User");
189     FILE *fp, *fp1, *fp2;
190     fp = fopen("logs.txt","a+");
191     SetColor(0);
192     if(fp == NULL){
193         MessageBox(0,"Error in Opening file\nMake sure your file is not write
protected","Warning",0);

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194
195     }else{
196         A:
197         fflush(stdin);
198         gotoxy(print+15,10);printf("      ");
199         gotoxy(print+9,10);printf("Acc No   : ");gets(user[z].accnum);
200         char deposits[20] = " - Deposits";
201         char withdrawals[20] = " - Withdrawals";
202         gotoxy(print,12); printf("      ");
203         gotoxy(print+9,12);printf("Name     : ");gets(user[z].accname);
204         snprintf(buf1,sizeof(buf1),"%s/%s%s.txt",dirName,cap(user[z].accname),
deposits);
205         snprintf(buf2,sizeof(buf2),"%s/%s%s.txt",dirName,cap(user[z].accname),
withdrawals);
206         fp1 = fopen(buf1,"w+");
207         fp2 = fopen(buf2,"w+");
208         gotoxy(print+6,14);printf("Password   : ");
209         for(i=0;i<15;++i){
210             user[z].accpass[i]=getch();
211             if(user[z].accpass[i]==13){
212                 break;
213             }
214             printf(" * ");
215         }
216         user[z].accpass[i]='\0';
217         strcpy(user[z].acchashedpass,user[z].accpass);
218         strset(user[z].acchashedpass,42);
219         gotoxy(print+5,16);printf("Phone Number : ");gets(user[z].accphone);
220         gotoxy(print+5,18);printf("Balance      : ");scanf("%f",&user[z].accbalance);
221
222         fprintf(fp1,"Withdrawal Record of: %s\n",user[z].accname);
223         fprintf(fp1,"Account Created at %s-----\n",asctime(timeinfo));
224         fprintf(fp1,"Operation\t\tOld Bal\t\tChange\t\tNew Bal");
225
226         fprintf(fp2,"Deposit Record of: %s\n",user[z].accname);
227         fprintf(fp2,"Account Created at %s-----\n",asctime(timeinfo));
228         fprintf(fp2,"Operation\t\tOld Bal\t\tChange\t\tNew Bal");
229
230         fprintf(fp, "\n%sAdd User: ",asctime(timeinfo));
231         fprintf(fp, "\t%s",user[z].accnum);
232         fprintf(fp, "\t%s",user[z].accname);
233         fprintf(fp, "\t\t%s",user[z].acchashedpass);
234         fprintf(fp, "\t\t\t%s",user[z].accphone);
235         fprintf(fp, "\t\t\t%0.2f",user[z].accbalance);
236
237         gotoxy(40,22); printf("The record is successfully added");
238         gotoxy(40,23); printf("      Press any to continue");
239         getch();
240         ++z;
241     }
242     SetColor(28);
243     fclose(fp);
244     fclose(fp1);
245     fclose(fp2);
246     return;
247 }
248 void searchuser(){
249     A:
250     clearWindow();
251     printheadng("Search User");
252     SetColor(0);
253     char uid[15];
254     int isFound = 0,x=0;
255     gotoxy(37,10);printf("Enter Acc Num to Search: ");fflush(stdin);
256     gets(uid);

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257 FILE *fp;
258 fp = fopen("record.txt", "rb");
259 while(x<50){
260     if(strcmpi(uid,user[x].accnum) == 0){
261         isFound = 1;
262         break;
263     }
264     ++x;
265 }
266 if(isFound == 1){
267     gotoxy(37,12);printf("The record is Found");
268     gotoxy(37,14);printf("ID      : %s",user[x].accnum);
269     gotoxy(37,16);printf("Name    : %s",user[x].accname);
270     gotoxy(37,18);printf("Phone No : %s",user[x].accphone);
271     gotoxy(37,20);printf("Balance : %0.2f",user[x].accbalance);
272
273 }else{
274     gotoxy(37,12);printf("Sorry, No record found in the database!");
275     getch();
276     goto A;
277 }
278 gotoxy(40,22); printf("Operation successfully executed");
279 gotoxy(40,23); printf("    Press any to continue");
280 getch();
281 SetColor(28);
282 fclose(fp);
283 return;
284 }
285 void deleteuser(){
286     int x=0;
287     char admincheck[15];
288     clearWindow();
289     clearWindow();
290     printhead("Delete Record");
291     SetColor(0);
292     char uid[15],pass[15];
293     int isFound = 0, print = 37,i=0;
294     B:
295     gotoxy(37,12);printf(" ");
296     gotoxy(37,10);printf("Enter ID of Acc to Delete: ");fflush(stdin);
297     gets(uid);
298     while(x<50){
299         if(strcmpi(uid,user[x].accnum)==0){
300             A:
301             gotoxy(37,14);printf(" ");
302             gotoxy(37,12);printf("Enter password to proceed : "); fflush(stdin);
303
304             //gets(pass);
305             for(i=0;i<15;++i){
306                 pass[i]=getch();
307                 if(pass[i]==13){
308                     break;
309                 }
310                 printf(" * ");
311             }
312             pass[i]='\0';
313
314             if(strcmp(pass,user[x].accpass)==0){
315                 gotoxy(37+28,12);printf("%s", user[x].acchashedpass);
316                 strcpy(user[x].accnum, "");
317                 gotoxy(37,14);printf("Record deleted!");
318             }else{
319                 gotoxy(37,14);printf("Wrong password!");
320                 goto A;
321             }
322             break;

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323     }
324     else{
325         gotoxy(37,12);printf("Account not found! Please try again :(");
326         goto B;
327         break;
328     }
329     ++x;
330 }
331 gotoxy(40,22); printf("Operation completely executed");
332 gotoxy(40,23); printf("    Press any to continue");
333 getch();
334 SetColor(28);
335 return;
336
337 }
338 void moduser(){
339     char admincheck[15];
340     clearWindow();
341     clearWindow();
342     printheadng("Modify Record");
343     SetColor(0);
344     char uid[15], pass[15];
345     int isFound = 0, print = 37, x=0,i=0;
346     char oldaccnum[15];
347     gotoxy(37,10);printf("Enter ID of account to modify: ");
348     fflush(stdin);
349     gets(uid);
350     FILE *fp;
351     fp = fopen("record.txt","a+");
352     while(x<50){
353         if(strncmp(uid,user[x].accnum) == 0){
354             A :
355             gotoxy(37+28,12);printf("    ");
356             gotoxy(37,12);printf("Enter password to proceed : "); fflush(stdin);
357
358             for(i=0;i<15;++i){
359                 pass[i]=getch();
360                 if(pass[i]==13){
361                     break;
362                 }
363                 printf("*");
364             }
365             pass[i]='\0';
366
367             if(strcmp(pass,user[x].accpass)==0){
368                 gotoxy(print,14);printf("    "); //clear wrong pw
message
369                 // strcpy(oldaccnum,user[x].accnum);
370                 fflush(stdin);
371                 //gotoxy(print,12);printf("New Acc No      : ");gets(user[x].accnum);
372                 gotoxy(print,14);printf("New Name        : ");gets(user[x].accname);
373                 gotoxy(print,16);printf("New Password    : ");//gets(user[x].accpass);
374                 for(i=0;i<15;++i){
375                     user[z].accpass[i]=getch();
376                     if(user[z].accpass[i]==13){
377                         break;
378                     }
379                 }
380                 printf("*");
381                 user[z].accpass[i]='\0';
382                 strcpy(user[x].acchashedpass,user[x].accpass);
383                 strset(user[x].acchashedpass, 42);
384                 gotoxy(print,18);printf("New Phone Number : ");gets(user[x].accphone);
385
386                 fprintf(fp, "\n%s",user[x].accnum);
387                 fprintf(fp, "\t\t\t%s",user[x].accname);

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388     fprintf(fp, "\\t\\t\\t%s", user[x].acchashedpass);
389     fprintf(fp, "\\t\\t\\t%s", user[x].accphone);
390     fprintf(fp, "\\t\\t\\t%0.2f", user[x].accbalance);
391     fprintf(fp, "\\nPrevID: %s", oldaccnum);
392     isFound=1;
393 }
394 else{
395     gotoxy(print,14);printf("Wrong Password!");
396     goto A;
397 }
398 }
399 ++x;
400 if(!isFound){
401     gotoxy(print, 12);printf("No Record Found");
402 }
403 gotoxy(40,22); printf("Operation successfully executed");
404 gotoxy(40,23); printf("    Press any to continue");
405 getch();
406 fclose(fp);
407 SetColor(28);
408 return;
409 }
410 }
411 }
412
413 void genreportu(){
414     system("cls");
415     int x,y;
416     char ch;
417     FILE *fp;
418     fp = fopen("allusers.txt", "w+");
419     fputs("\\t\\t\\t-----\\n\\t\\t\\tBanko De Jiro\\n\\t\\t\\tAll
Users\\n\\t\\t\\t-----", fp);
420     fputs("\\nNo.\\tName\\t\\tPass\\t\\tPhone Number\\t\\tBalance", fp);
421     for(x=0;x<50;x++){
422         if(user[x].accbalance!=0){
423             fprintf(fp, "\\n%s", user[x].accnum);
424             fprintf(fp, "\\t%s", user[x].accname);
425             fprintf(fp, "\\t\\t%s", user[x].acchashedpass);
426             fprintf(fp, "\\t\\t\\t%s", user[x].accphone);
427             fprintf(fp, "\\t\\t\\t%0.2f", user[x].accbalance);
428         }
429     }
430     fclose(fp);
431     fp = fopen("allusers.txt", "r");
432     SetColor(0);
433     fseek(fp, 0, SEEK_SET);
434     while((ch = fgetc(fp)) != EOF){
435         printf("%c", ch);
436     }
437     gotoxy(45,23); printf("Operation executed");
438     gotoxy(45,24); printf("Press any to continue");
439     fclose(fp);
440     getch();
441     ClearConsoleToColors(17,15);
442     window();
443 }
444 void genreportwadmin(){
445     system("cls");
446     int x,y;
447     char ch;
448     FILE *fp;
449     fp = fopen("withdrawals.txt", "r");
450     SetColor(0);
451     fseek(fp, 0, SEEK_SET);
452     while((ch = fgetc(fp)) != EOF){

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453     printf("%c", ch);
454 }
455 gotoxy(45,23); printf("Operation executed");
456 gotoxy(45,24); printf("Press any to continue");
457 fclose(fp);
458 getch();
459 ClearConsoleToColors(17,15);
460 window();
461 clearWindow();
462
463 }
464 void genreportdadmin(){
465     system("cls");
466     int x,y;
467     char ch;
468     FILE *fp;
469     fp = fopen("deposits.txt","r");
470     SetColor(0);
471     fseek(fp, 0, SEEK_SET);
472     while((ch = fgetc(fp)) != EOF){
473         printf("%c", ch);
474     }
475     gotoxy(45,23); printf("Operation executed");
476     gotoxy(45,24); printf("Press any to continue");
477     fclose(fp);
478     getch();
479     ClearConsoleToColors(17,15);
480     window();
481     clearWindow();
482
483 }
484 void genreportw(){
485     char namename[20],uid[15];
486     int isFound=0;
487     int x=0,y;
488     clearWindow();
489     A:
490     gotoxy(37+9+13,10);printf("      ");
491     gotoxy(37+9,10);printf("Acc Num   : ");fflush(stdin);gets(uid);
492
493     while(x<50){
494         if(strcmpi(uid,user[x].accnum) == 0){
495             isFound = 1;
496             break;
497         }
498         ++x;
499     }
500     if(isFound == 1){
501         system("cls");
502         char ch;
503         FILE *fp;
504         char buf[0x100];
505         char withdraw[20] = " - Withdrawals";
506         snprintf(buf,sizeof(buf),"%s/%s%s.txt",dirName,cap(user[x].accname
),withdraw);
507         fp = fopen(buf,"r");
508         //fp = fopen("withdrawals.txt","r");
509         SetColor(0);
510         fseek(fp, 0, SEEK_SET);
511         while((ch = fgetc(fp)) != EOF){
512             printf("%c", ch);
513         }
514         gotoxy(45,23); printf("Operation executed");
515         gotoxy(45,24); printf("Press any to continue");
516         fclose(fp);
517

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518         getch();
519         ClearConsoleToColors(17,15);
520         window();
521         clearWindow();
522     }else{
523         gotoxy(37,12);printf("Sorry, No record found in the database!");
524         getch();
525         goto A;
526     }
527 }
528 void genreportd(){
529     char namename[20],uid[15];
530     int isFound=0;
531     int x=0,y;
532     clearWindow();
533     A:
534     gotoxy(37+9+13,10);printf("      ");
535     gotoxy(37+9,10);printf("Acc Num   : ");fflush(stdin);gets(uid);
536
537     while(x<50){
538         if(strcmpi(uid,user[x].accnum) == 0){
539             isFound = 1;
540             break;
541         }
542         ++x;
543     }
544     if(isFound == 1){
545         system("cls");
546
547         char ch;
548         FILE *fp;
549         char buf[0x100];
550         char deposit[20]=" - Deposits";
551         snprintf(buf,sizeof(buf),"%s/%s%s.txt",dirName,cap(user[x].accname
);deposit);
552         fp = fopen(buf,"r");
553
554         SetColor(0);
555         fseek(fp, 0, SEEK_SET);
556         while((ch = fgetc(fp)) != EOF){
557             printf("%c", ch);
558         }
559         gotoxy(45,23); printf("Operation executed");
560         gotoxy(45,24); printf("Press any to continue");
561         fclose(fp);
562
563         getch();
564         ClearConsoleToColors(17,15);
565         window();
566     }else{
567         gotoxy(37,12);printf("Sorry, No record found in the database!"
);
568         getch();
569         goto A;
570     }
571 }
572 void genreport(){
573     clearWindow();
574     SetColor(0);
575     printheadng("Generate Report");
576     char choice;
577     gotoxy(37,10);printf("Select One: ");
578     gotoxy(37,14);printf("1. Generate Report of All Users");
579     gotoxy(37,16);printf("2. Generate Report of All Withdrawals");
580     gotoxy(37,18);printf("3. Generate Report of All Deposits");
581     gotoxy(37,20);printf("Enter your choice: ");fflush(stdin);

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582     A:
583     gotoxy(58,20);printf("    ");
584     gotoxy(58,20);scanf(" %c",&choice);
585     gotoxy(37,22);printf("                                ");
586
587     switch(choice){
588         case '1':
589             genreportu();
590             break;
591         case '2':
592             if(strcmp(uname,"admin")==0){
593                 genreportwadmin();
594             }else{
595                 genreportw();
596             }
597             break;
598         case '3':
599             if(strcmp(uname,"admin")==0){
600                 genreportdadmin();
601             }else{
602                 genreportd();
603             }
604             break;
605         default:
606             gotoxy(37,22);printf("Error! Please try again! :(");
607             goto A;
608             break;
609     }
610 }
611
612 void exitfunc(){
613     FILE *fp;
614     fp = fopen("record.txt","a+");
615     fputs("\n\n",fp);
616     fclose(fp);
617     exit(0);
618 }
619
620 void changepass(){
621     clearWindow();
622     printhead("Change Password");
623     SetColor(0);
624     char uid[15];
625     char pass[15];
626     char temppass[15];
627     int isFound = 0,x=0;
628     gotoxy(37,10);printf("Enter Acc Num: ");fflush(stdin);
629     gets(uid);
630     FILE *fp;
631     fp = fopen("record.txt","rb");
632     while(x<50){
633         if(strcmpi(uid,user[x].accnum) == 0){
634             gotoxy(37,12);printf("The record is Found");
635             gotoxy(37,14);printf("Name          : %s",user[x].accname);
636             A:
637             gotoxy(37,20);printf("                                ");
638             gotoxy(37,16);printf("                                ")
639
640             gotoxy(37,16);printf("Enter old password : "); fflush(stdin);
641             gets(pass);
642             strcpy(temppass,pass);
643             strset(temppass,42);
644             gotoxy(58,16);printf("%s",temppass);
645             if(strcmp(pass,user[x].accpass)==0){
646                 gotoxy(37,18);printf("Enter new password : "); fflush(stdin);
647                 gets(user[x].accpass);

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647         strcpy(user[x].acchashedpass,user[x].accpass);
648         strset(user[x].acchashedpass,42);
649         gotoxy(58,18);printf("%s",user[x].acchashedpass);
650     }
651     else{
652         gotoxy(37,20);printf("Wrong password!");
653         goto A;
654     }
655     break;
656 }
657 else{
658     gotoxy(37,12);printf("Sorry, No record found in the database :(");
659 }
660 ++x;
661
662 }
663 gotoxy(40,22); printf("Operation successfully executed");
664 gotoxy(40,23); printf("Navigate back in the main window");
665 SetColor(28);
666 }
667
668 void withdraw(){
669     //int x=0, isFound=0;
670     time_t rawtime;
671     struct tm * timeinfo;
672     time ( &rawtime );
673     timeinfo = localtime ( &rawtime );
674     clearWindow();
675     printhead("Withdraw");
676     SetColor(0);
677     char uid[15];
678     char pass[15];
679     char temppass[15];
680     float towithdraw = 0;
681     int isFound = 0,x=0,i=0;
682     B:
683     gotoxy(37+25,10);printf(" ");
684     gotoxy(37,10);printf("Enter acc num: ");fflush(stdin);
685     gets(uid);
686
687     while(x<50){
688         if(strcmpi(user[x].accnum,uid)==0)
689             break;
690         ++x;
691     }
692
693     FILE *fp, *fp1, *fp2;
694     fp = fopen("withdrawals.txt","a");
695     fp1 = fopen("logs.txt","a");
696     char buf[0x100];
697     char withdraw[20] = " - Withdrawals";
698
699     while(x<50){
700         if(strcmpi(uid,user[x].accnum) == 0){
701             isFound=1;
702             break;
703         }
704         ++x;
705     }
706
707     snprintf(buf,sizeof(buf),"%s/%s%s.txt",dirName,cap(user[x].accname),
withdraw);
708     fp2 = fopen(buf,"a");
709
710     if(isFound==1){
711         gotoxy(37,12);printf("The record is found");

```

```

712     fprintf(fp, "\n%s", user[x].accnum);
713     fprintf(fp, "\t\t%s", user[x].accname);
714     fprintf(fp, "\t\t\t%0.2f", user[x].accbalance);
715
716
717     fprintf(fp1, "\n%sWithdrawal:", asctime(timeinfo));
718     fprintf(fp1, "\t%s", user[x].accnum);
719     fprintf(fp1, "\t\t%s", user[x].accname);
720     fprintf(fp1, "\t\t\t%0.2f", user[x].accbalance);
721
722     A:
723     gotoxy(37,14);printf("Enter password to proceed : "); fflush(stdin);
724
725     //gets(pass);
726     for(i=0;i<15;++i){
727         pass[i]=getch();
728         if(pass[i]==13){
729             break;
730         }
731         printf("*");
732     }
733     pass[i]='\0';
734
735     if(strcmp(pass,user[x].accpass)==0){
736         gotoxy(37+28,14);printf(" ");
737         gotoxy(37,16);printf(" ");
738         strcpy(temppass,pass);
739         strset(temppass,42);
740         gotoxy(37+28,14);printf("%s",temppass);
741         fprintf(fp2, "\nWithdraw:\t\t%0.2f",user[x].accbalance);
742         gotoxy(37,16);printf("Current Balance: %0.2f",user[x].accbalance);
743         C:
744         gotoxy(37,18);printf("Enter amount to withdraw: "); fflush(stdin);
745         scanf("%f",&towithdraw);
746         if(towithdraw<user[x].accbalance){
747
748             gotoxy(37,21);printf(" ");
749             gotoxy(37,19);printf("Old Balance: %0.2f",user[x].accbalance);
750             fprintf(fp2, "\t\t\t-%0.2f",towithdraw);
751             user[x].accbalance-=towithdraw;
752             gotoxy(37,20);printf("New Balance: %0.2f",user[x].accbalance);
753             fprintf(fp2, "\t\t\t%0.2f",user[x].accbalance);
754             fprintf(fp, "\t\t\t%0.2f\t\t\t\t%0.2f",towithdraw,user[x].accbalance);
755             fprintf(fp1, "\t\t\t%0.2f\t\t\t\t\t%0.2f",towithdraw,user[x].accbalance);
756         }
757         else{
758             gotoxy(37,21);printf("Invalid amount!");
759             goto C;
760         }
761     }else{
762         gotoxy(37,14);printf("Password Incorrect");
763         goto A;
764     }
765 }else{
766     gotoxy(37,12);printf("Sorry, No record found in the database!");
767     goto B;
768 }
769
770
771 gotoxy(40,22); printf("Operation successfully executed");
772 gotoxy(40,23); printf("Navigate back in the main window");
773 fclose(fp);
774 fclose(fp1);
775 fclose(fp2);
776 getch();
777 SetColor(28);

```

```

778 }
779 void deposit(){
780     time_t rawtime;
781     struct tm * timeinfo;
782     time ( &rawtime );
783     timeinfo = localtime ( &rawtime );
784     clearWindow();
785     printheadig("Deposit");
786     SetColor(0);
787     char uid[15];
788     char pass[15];
789     char temppass[15];
790     float todeposit = 0;
791     int isFound = 0,x=0;
792     B:
793     gotoxy(37+25,10);printf(" ");
794     gotoxy(37,10);printf("Enter Acc Num to Search: ");fflush(stdin);
795     gets(uid);
796     FILE *fp, *fp1, *fp2;
797     fp = fopen("deposits.txt","a");
798     fp1 = fopen("logs.txt","a");
799     char buf[0x100];
800     char deposit[20]= " - Deposits";
801
802     while(x<50){
803         if(strcmpi(uid,user[x].accnum) == 0){
804             gotoxy(37,12);printf("The record is Found");
805             isFound=1;
806             break;
807         }
808         ++x;
809     }
810
811     snprintf(buf,sizeof(buf),"%s/%s%s.txt",dirName,cap(user[x].accname),deposit);
812     fp2 = fopen(buf,"a");
813
814     if(isFound==1){
815         fprintf(fp,"\n%s",user[x].accnum);
816         fprintf(fp,"\t\t%s",user[x].accname);
817         fprintf(fp,"\t\t\t\t\t%.2f",user[x].accbalance);
818
819         fprintf(fp1,"\n%sDeposit:",asctime(timeinfo));
820         fprintf(fp1,"\t\t%s",user[x].accnum);
821         fprintf(fp1,"\t\t\t\t\t%s",user[x].accname);
822         fprintf(fp1,"\t\t\t\t\t%.2f",user[x].accbalance);
823
824         A:
825         gotoxy(37+28,16);printf(" ");
826         C:
827         gotoxy(37,17);printf("Enter amount to deposit: "); fflush(stdin);
828         scanf("%f",&todeposit);
829         gotoxy(37,18);printf(" ");
830         if(todeposit>=0){
831             gotoxy(37,19);printf("Old Balance: %.2f",user[x].accbalance);
832             fprintf(fp2,"\nDeposit:\t\t\t\t\t%.2f",user[x].accbalance);
833             fprintf(fp2,"\t\t\t\t\t%.2f",todeposit);
834             user[x].accbalance+=todeposit;
835             gotoxy(37,20);printf("New Balance: %.2f",user[x].accbalance);
836             fprintf(fp2,"\t\t\t\t\t%.2f",user[x].accbalance);
837             fprintf(fp,"\t\t\t\t\t%.2f\t\t\t\t\t%.2f",todeposit,user[x].accbalance);
838             fprintf(fp1,"\t\t\t\t\t%.2f\t\t\t\t\t%.2f",todeposit,user[x].accbalance);
839         }else{
840             gotoxy(37,18);printf("Invalid amount!");
841             goto C;
842         }
843     }else{

```

```

844         gotoxy(37,12);printf("Sorry, No record found in the database!");
845         goto B;
846     }
847
848     gotoxy(40,22); printf("Operation successfully executed");
849     gotoxy(40,23); printf("Navigate back in the main window");
850     getch();
851     fclose(fp);
852     fclose(fp1);
853     fclose(fp2);
854     SetColor(28);
855 }
856 void withdepo(){
857     clearWindow();
858     SetColor(0);
859     printheadig("Transactions");
860     char choice;
861     SetColor(0);
862     gotoxy(37,10);printf("Select One: ");
863     gotoxy(37,14);printf("1. Withdraw");
864     gotoxy(37,16);printf("2. Deposit");
865     gotoxy(37,20);printf("Enter your choice: ");fflush(stdin);
866     gotoxy(58,20);scanf(" %c",&choice);
867     switch(choice){
868         case '1':
869             withdraw();
870             break;
871         case '2':
872             deposit();
873             break;
874         default:
875             gotoxy(37,20);printf("Error! Please try again! :(");
876             break;
877     }
878 }
879
880 void mainmenu(){
881     int choice;
882     SetColor(3);
883     int x = 2;
884     ClearConsoleToColors(17,15);
885     window();
886     while(choice!=8){
887         SetColor(3);
888         gotoxy(x+19,24);printf("      "); //line covers previous input with
whitespace
889         gotoxy(x,8);printf("1. Add User");
890         gotoxy(x,10);printf("2. Search For A User");
891         gotoxy(x,12);printf("3. Modify A User's Record");
892         gotoxy(x,14);printf("4. Delete A User's Record");
893         gotoxy(x,16);printf("5. Change password");
894         gotoxy(x,18);printf("6. Transactions");
895         gotoxy(x,20);printf("7. Generate Reports");
896         gotoxy(x,22);printf("8. Back");
897         gotoxy(x,24);printf("Enter your choice: ");
898         scanf("%d",&choice);
899         gotoxy(x+49,15);printf("      ");
900         switch(choice){
901             case 1:
902                 adduser();
903                 break;
904             case 2:
905                 searchuser();
906                 break;
907             case 3:
908                 moduser();

```

```

909         break;
910     case 4:
911         deleteuser();
912         break;
913     case 5:
914         changepass();
915         break;
916     case 6:
917         withdepo();
918         break;
919     case 7:
920         genreport();
921         break;
922     case 9:
923         system("notepad logs.txt");
924         break;
925     default:
926         gotoxy(x+49,15);printf("Invalid Input!");
927         gotoxy(x+53,16);printf("Error!");
928         break;
929     }
930 }
931 }
932 }
933 }
934 void adminmenu(){
935     int choice=0;
936     int x = 2;
937     //system("cls");
938     ClearConsoleToColors(17,15);
939     window();
940     while(choice!=6){
941         SetColor(3);
942         clearWindow();
943         //SetColor(0);
944         gotoxy(x+19,24);printf("      "); //line covers previous input with
whitespace
945         gotoxy(x,8);printf("          ADMIN MENU");
946         gotoxy(x,10);printf("1. Add User");
947         gotoxy(x,12);printf("2. Search For A User");
948         gotoxy(x,14);printf("3. Modify A User's Record");
949         gotoxy(x,16);printf("4. Delete A User's Record");
950         gotoxy(x,18);printf("5. Generate Reports");
951         gotoxy(x,20);printf("6. Login Screen");
952         gotoxy(x,24);printf("Enter your choice: ");
953         fflush(stdin);scanf("%d",&choice);
954         gotoxy(x+7,22);printf("          "); //clears invalid input
955         switch(choice){
956             case 1:
957                 adduser();
958                 break;
959             case 2:
960                 searchuser();
961                 break;
962             case 3:
963                 moduser();
964                 break;
965             case 4:
966                 deleteuser();
967                 break;
968             case 5:
969                 genreport();
970                 // changepass();
971                 break;
972             case 0:
973                 system("notepad logs.txt");

```

```

974         break;
975     default:
976         gotoxy(x+7,22);printf("Invalid Input!");
977         // gotoxy(x+53,16);printf("Error!");
978         break;
979     }
980 }
981 }
982 }
983 void tellermenu(){
984     int choice=0;
985     int x = 2;
986     ClearConsoleToColors(17,15);
987     window();
988     while(choice!=5){
989         SetColor(3);
990         clearWindow();
991         gotoxy(x+19,24);printf("      "); //line covers previous input with
whitespace
992         gotoxy(x,8);printf("      TELLER MENU");
993         gotoxy(x,10);printf("1. Search For A User");
994         gotoxy(x,12);printf("2. Withdraw");
995         gotoxy(x,14);printf("3. Deposit");
996         gotoxy(x,16);printf("4. Generate Reports");
997         gotoxy(x,18);printf("5. Login Screen");
998         gotoxy(x,24);printf("Enter your choice: ");
999         fflush(stdin);scanf("%d",&choice);
1000         gotoxy(x+7,22);printf("      "); //clears invalid input
1001         switch(choice){
1002             case 1:
1003                 searchuser();
1004                 break;
1005             case 2:
1006                 withdraw();
1007                 break;
1008             case 3:
1009                 deposit();
1010                 break;
1011             case 4:
1012                 genreport();
1013                 break;
1014             case 0:
1015                 system("notepad logs.txt");
1016                 break;
1017             default:
1018                 gotoxy(x+7,22);printf("Invalid Input!");
1019                 // gotoxy(x+53,16);printf("Error!");
1020                 break;
1021         }
1022     }
1023 }
1024 }
1025
1026 int main(){
1027     time_t rawtime;
1028     struct tm * timeinfo;
1029     time ( &rawtime );
1030     timeinfo = localtime ( &rawtime );
1031     char pass[15]="";
1032     char* dirname="Transaction Records";
1033     pass[0] = '\0';
1034     int i=0;
1035     mkdir(dirname);
1036     snprintf(dirname,sizeof(dirname),"%s", prefix);
1037     ClearConsoleToColors(17,15);
1038     FILE *fp;

```



```

1039     fp = fopen("allusers.txt", "w");
1040     fputs("\t\t\t-----\n\t\t\tBanko De Jiro\n\t\t\tAll
Users\n\t\t\t\t-----", fp);
1041     fputs("\nNo.\tName\t\tPass\t\tPhone Number\t\tBalance", fp);
1042     fclose(fp);
1043     FILE *fp1;
1044     fp1 = fopen("withdrawals.txt", "w");
1045     fputs("\t\t\t-----\n\t\t\tBanko De
Jiro\n\t\t\t\tWithdrawals\n\t\t\t\t-----", fp1);
1046     fputs("\nNo.\tName\t\tOld Balance\t\tWithdrawn\t\tNew Balance", fp1);
1047     fclose(fp1);
1048     FILE *fp2;
1049     fp2 = fopen("deposits.txt", "w");
1050     fputs("\t\t\t-----\n\t\t\tBanko De
Jiro\n\t\t\t\tDeposits\n\t\t\t\t\t-----", fp2);
1051     fputs("\nNo.\tName\t\tOld Balance\t\tDeposited\t\tNew Balance", fp2);
1052     fclose(fp2);
1053     FILE *fp3;
1054     fp3 = fopen("logs.txt", "w");
1055     fputs("\t\t\t--Logs--", fp3);
1056     fclose(fp);
1057     SetConsoleTitle("[Finals] Banking System");
1058
1059     while(1){
1060         ClearConsoleToColors(17,15);
1061         window();
1062         //clearWindow();
1063         SetColor(0);
1064
1065         gotoxy(48+2,8+2);printf(" dP"b8. dP"Y8 ");
1066         gotoxy(48+2,9+2);printf("dP  `` `Ybo.\" ");
1067         gotoxy(48+2,10+2);printf("Yb      o.`Y8b ");
1068         gotoxy(48+2,11+2);printf(" YboodP 8bodP' ");
1069
1070         gotoxy(49+1,12+3);printf(" .d      oP\"Yb. ");
1071         gotoxy(49+1,13+3);printf(" .d88 ____\"' dP' ");
1072         gotoxy(49+1,14+3);printf(" 88  \"\"\"\"\" dP' ");
1073         gotoxy(49+1,15+3);printf(" 88      .d8888 ");
1074
1075
1076         gotoxy(52,20);printf(" Good Day! ");
1077         gotoxy(45,21);printf("%s",asctime(timeinfo));
1078         gotoxy(15,9);printf("LOGIN");
1079         A:
1080         gotoxy(7,14);printf("Username:          ");
1081         gotoxy(7,18);printf("Password:          ");
1082         gotoxy(17,14);scanf("%s",&uname);
1083         if(strcmp(strlwr(uname),"exit")==0){
1084             gotoxy(25,25);
1085             exit(1);
1086         }else if(strcmp(strlwr(uname),"admin")!=0&&strcmp(strlwr(uname),"teller")!=0&&
strcmp(strlwr(uname),"jirro")!=0){
1087             gotoxy(10,20);printf("No account found!");
1088             goto A;
1089         }
1090         gotoxy(10,20);printf("          "); //clears no account found
1091
1092         B:
1093         gotoxy(7,18);printf("Password:          ");
1094         gotoxy(17,18);
1095         for(i=0;i<15;++i){
1096             pass[i]=getch();
1097             printf(" *");
1098             if(pass[i]==13){
1099                 break;
1100             }

```

```
1101     }
1102     pass[i]='\0';
1103     if(strcmp(strlwr(uname), "admin")==0&&strcmp(pass, adminpass)==0){
1104         adminmenu();
1105     }else if(strcmp(strlwr(uname), "teller")==0&&strcmp(pass, tellerpass)==0){
1106         tellermenu();
1107     }else if(strcmp(strlwr(uname), "jirro")==0&&strcmp(pass, masterpass)==0){
1108         mainmenu();
1109     }else{
1110         gotoxy(10,20); printf("Wrong password!");
1111         goto B;
1112     }
1113     gotoxy(10,20); printf("                "); //clears invalid password
1114 }
1115 return 0;
1116 }
```