



```

p[c].code,&emp[c].designation,&emp[c].exp,&emp[c].age,&emp[c].salary,&emp[c].AnyLoan,&emp[c].HRA,&emp
[c].PF,&emp[c].tax,&emp[c].MealAllowance,&emp[c].TransportAllowance,&emp[c].MedicalAllowance,&emp[c].
LoanBalance,&emp[c].LoanDebit,&emp[c].grosspay,&emp[c].workingHours,&emp[c].DA);
78         c++;
79     }
80     num=c;
81 }
82 fclose(fp);
83 }
84
85 void saverrecords()
86 {
87     if(num==0)
88     {
89         system("del Records.txt");
90     }
91     else
92     {
93         FILE *fp;
94         fp = fopen("Records.txt", "w");
95         for(int i=0;i<num;i++)
96         {
97             fprintf(fp, "%s\t%d\t%s\t%d\t%d\t%d\t%c\t%d\t%d\t%d\t%d\t%d\t%d\t%d\t%d\t%d\t%d\t%d\n", emp[i].name, emp
[i].code, emp[i].designation, emp[i].exp, emp[i].age, emp[i].salary, emp[i].AnyLoan, emp[i].HRA, emp[i].PF,
emp[i].tax, emp[i].MealAllowance, emp[i].TransportAllowance, emp[i].MedicalAllowance, emp[i].LoanBalance,
emp[i].LoanDebit, emp[i].grosspay, emp[i].workingHours, emp[i].DA);
98         }
99         fclose(fp);
100     }
101 }
102
103 void Cdelay(int msec)
104 {
105     long goal = msec + (clock());
106     while (goal > (clock()));
107 }
108
109 bool isFilePresent()
110 {
111     FILE *fp;
112     fp = fopen("Records.txt", "r");
113     if(fp==NULL)
114         return false;
115     else
116         return true;
117 }
118 void loginFrame1(int xLenS = 18, int yLenS = 8, int xLenE = 55, int yLenE = 15)
119 {
120     system("cls");
121     gotoXY(xLenS, yLenS); printf("%c", 201);
122
123     gotoXY(xLenS, yLenE); printf("%c", 200);
124
125     for(int i=xLenS+1;i<=xLenE-1;i++) //Top and Bottom Border line
126     {
127         //Cdelay(0);
128         gotoXY(i, yLenS);
129         printf("%c", 205);
130         //puts(style);
131         gotoXY(i, yLenE);
132         //puts(style);
133         printf("%c", 205);
134     }
135
136     gotoXY(xLenE, yLenS); printf("%c", 187);
137     gotoXY(xLenE, yLenE); printf("%c", 188);
138     for(int i=yLenS+1;i<=yLenE-1;i++) //Left and Right Border Line
139     {
140         //Cdelay(20);
141         gotoXY(xLenS, i);
142         printf("%c", 186);
143         //puts(style);
144         gotoXY(xLenE, i);
145         printf("%c", 186);
146         //puts(style);
147     }
148     printf("\n\n");

```

```

149     }
150     void login()
151     {
152
153         char UserName[30], Password[30], ch; int i=0;
154         gotoXY(20,10);
155         printf("Enter UserName : ");
156
157         cin>>UserName;
158         gotoXY(20,12);
159         cout<<"Enter Password : ";
160         while(1)
161         {
162             ch = getch();
163             if(ch==13)
164                 break;
165             if(ch==32 || ch==9)
166                 continue;
167             else
168             {
169                 cout<<"*";
170                 Password[i]=ch;
171                 i++;
172             }
173         }
174         Password[i] = '\0';
175         if(strcmp(UserName, "admin")==0 && strcmp(Password, "password")==0)
176         {
177             system("cls");
178             loginFrame1();
179             gotoXY(27,10);
180             cout<<"Login Success!!!";
181             gotoXY(21,12);
182             cout<<"Will be redirected in 3 Seconds...";
183             gotoXY(56,12);
184             Cdelay(1000);
185             gotoXY(44,12);
186             cout<<"\b \b2";
187             gotoXY(56,12);
188             Cdelay(1000);
189             gotoXY(44,12);
190             cout<<"\b \b1";
191             gotoXY(56,12);
192             Cdelay(1000);
193         }
194         else
195         {
196             system("cls");
197             loginFrame1();
198             gotoXY(27,10);
199             printf("Access Denied!!!\a");
200             gotoXY(21,12);
201             cout<<"Will be redirected in 3 Seconds...";
202             gotoXY(56,12);
203             Cdelay(1000);
204             gotoXY(44,12);
205             cout<<"\b \b2";
206             gotoXY(56,12);
207             Cdelay(1000);
208             gotoXY(44,12);
209             cout<<"\b \b1";
210             gotoXY(56,12);
211             Cdelay(1000);
212             system("cls");
213             loginFrame1();
214             login();
215         }
216     }
217     void setWindowSize(int width=670, int height=445)
218     {
219         HWND console = GetConsoleWindow();
220         RECT r;
221         GetWindowRect(console, &r);
222         MoveWindow(console, r.left, r.top, width, height, TRUE);
223     }
224     void gotoXY(int X, int Y)
225     {
226         COORD coordinates;

```

```

227     coordinates.X = X;
228     coordinates.Y = Y;
229     SetConsoleCursorPosition(GetStdHandle(STD_OUTPUT_HANDLE), coordinates);
230 }
231
232 void borderNoDelay(int xLenS = 2, int yLenS = 2, int xLenE = 76, int yLenE = 24 )
233 {
234     system("cls");
235     gotoXY(xLenS, yLenS); printf("%c", 201);
236
237     gotoXY(xLenS, yLenE); printf("%c", 200);
238
239     for(int i=xLenS+1; i<=xLenE-1; i++) //Top and Bottom Border line
240     {
241         gotoXY(i, yLenS);
242         printf("%c", 205);
243         gotoXY(i, yLenE);
244         printf("%c", 205);
245     }
246     gotoXY(xLenE, yLenS); printf("%c", 187);
247     gotoXY(xLenE, yLenE); printf("%c", 188);
248     for(int i=yLenS+1; i<=yLenE-1; i++) //Left and Right Border Line
249     {
250         gotoXY(xLenS, i);
251         printf("%c", 186);
252         gotoXY(xLenE, i);
253         printf("%c", 186);
254     }
255     printf("\n\n");
256 }
257 void border(int xLenS = 2, int yLenS = 2, int xLenE = 76, int yLenE = 22 )
258 {
259     system("cls");
260     gotoXY(xLenS, yLenS); printf("%c", 201);
261
262     gotoXY(xLenS, yLenE); printf("%c", 200);
263
264     for(int i=xLenS+1; i<=xLenE-1; i++) //Top and Bottom Border line
265     {
266         Cdelay(15);
267         gotoXY(i, yLenS);
268         printf("%c", 205);
269         //puts(style);
270         gotoXY(i, yLenE);
271         //puts(style);
272         printf("%c", 205);
273     }
274
275     gotoXY(xLenE, yLenS); printf("%c", 187);
276     gotoXY(xLenE, yLenE); printf("%c", 188);
277     for(int i=yLenS+1; i<=yLenE-1; i++) //Left and Right Border Line
278     {
279         Cdelay(15);
280         gotoXY(xLenS, i);
281         printf("%c", 186);
282         //puts(style);
283         gotoXY(xLenE, i);
284         printf("%c", 186);
285         //puts(style);
286     }
287     printf("\n\n");
288 }
289 void loginFrame(int xLenS = 18, int yLenS = 8, int xLenE = 55, int yLenE = 15)
290 {
291     border(xLenS, yLenS, xLenE, yLenE);
292 }
293 void insert()
294 {
295
296     borderNoDelay();
297     int i=num;
298     int sal, PF, TAX, HRA, MealA, MedicalA, TransportA, LoanBal, LoanDeb, h, DA;
299     char loan;
300     num+=1;
301     gotoXY(28, 4);
302     printf("Insert New Record");
303     gotoXY(10, 6);
304     cout<<"Name : ";

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305 //cin.getline(emp[i].name,sizeof(emp[i].name));
306 cin>>emp[i].name;
307 gotoXY(10,8);
308 cout<<"Code : ";
309 cin>>emp[i].code;
310 gotoXY(10,10);
311 cout<<"Designation : ";
312 cin>>emp[i].designation;
313 gotoXY(10,12);
314 cout<<"Years of Experience : ";
315 cin>>emp[i].exp;
316 gotoXY(10,14);
317 cout<<"Age : ";
318 cin>>emp[i].age;
319 gotoXY(10,16);
320 cout<<"Enter Working Hours : ";
321 cin>>h;
322 sal = h*300;
323 emp[i].workingHours = h;
324 do
325 {
326     gotoXY(10,18);
327     cout<<"Any Loan (Y/N) ? : \b \b";
328     loan=getche();
329     if(loan=='Y' || loan == 'y' || loan == 'n' || loan == 'N')
330         break;
331 }while(1);
332 if(loan=='y' || loan=='Y')
333 {
334     gotoXY(10,20);
335     cout<<"Enter Loan Balance : ";
336     cin>>LoanBal;
337 }
338 else
339 {
340     LoanBal=0;
341 }
342 gotoXY(14,22);
343 cout<<"Recorded Succesfully...!!!";
344
345 TAX = 0.04 * sal;
346 DA = 1.20 * sal;
347 PF = 0.12 * sal;
348 HRA = sal * 0.27;
349 MealA = 300;
350 MedicalA = 300;
351 TransportA = 300;
352 LoanDeb = sal * 0.09;
353 if(LoanDeb > LoanBal)
354 {
355     LoanBal = 0;
356     LoanDeb = LoanBal;
357 }
358 emp[i].salary = sal;
359 emp[i].DA = DA;
360 emp[i].tax=TAX;
361 emp[i].PF = PF;
362 emp[i].HRA = HRA;
363 emp[i].MealAllowance = MealA;
364 emp[i].MedicalAllowance = MedicalA;
365 emp[i].TransportAllowance = TransportA;
366 emp[i].LoanBalance = LoanBal-LoanDeb;
367 emp[i].AnyLoan = loan;
368 emp[i].LoanDebit = LoanDeb;
369 emp[i].grosspay = (sal+MealA+MedicalA+TransportA+HRA+DA)-(PF+TAX+LoanDeb) ;
370 getch();
371 }
372
373 void intro()
374 {
375     gotoXY(27,4); printf("PAYROLL MANAGEMENT SYSTEM");
376     gotoXY(25,5); for(int i=0;i<29;i++) printf("%c",196);
377     gotoXY(20,8); printf("Designed and Programmed by:");
378     gotoXY(20,9); for(int i=0;i<29;i++) printf("%c",196);
379     gotoXY(20,11); printf("Yash Patil");
380     gotoXY(20,13); printf("https://github.com/yashpatil118");
381     gotoXY(20,15); printf("https://www.linkedin.com/in/yash-patil-069820252/");
382     gotoXY(24,20);printf("Press Any key to continue...");

```

```

383     getch();
384
385 }
386
387 void list()
388 {
389     //system("cls");
390     borderNoDelay();
391     gotoXY(20,4);
392     printf("***** List of the Employees *****");
393     gotoXY(6,6);
394     cout<<"Name\tCode\tDesignation\tYears (EXP) \tAge\tSalary "<<endl;
395     gotoXY(6,7);
396     cout<<"-----"<<endl;
397     for(int i=0,j=8;i<=num-1;i++,j++)
398     {
399         gotoXY(6,j);
400         cout<<emp[i].name;
401         gotoXY(19,j);
402         cout<<emp[i].code;
403         gotoXY(26,j);
404         cout<<emp[i].designation;
405         gotoXY(47,j);
406         cout<<emp[i].exp;
407         gotoXY(58,j);
408         cout<<emp[i].age;
409         gotoXY(66,j);
410         cout<<emp[i].grosspay;
411     }
412     getch();
413 }
414
415 void loading()
416 {
417     system("cls");
418     gotoXY(55,20);
419     printf("Loading...");
420     gotoXY(50,22);
421     for(int i = 0; i<20; i++)
422     {
423         Cdelay(200);
424         printf("%c",254);
425     }
426 }
427 void menu()
428 {
429     //system("cls");
430     borderNoDelay();
431     //gotoXY(0,0);
432     //cout<<"Number of Records Available : "<<num;
433     gotoXY(16,4);
434     printf("***** Payroll Management System 1.0 ***** ");
435     gotoXY(12,6);
436     cout<<"Press i ----> Insert New Record.";
437     gotoXY(12,8);
438     cout<<"Press e ----> Edit a Record.";
439     gotoXY(12,10);
440     cout<<"Press d ----> Delete a Record.";
441     gotoXY(12,12);
442     cout<<"Press s ----> Search a Record.";
443     gotoXY(12,14);
444     cout<<"Press l ----> List The Employee Table.";
445     gotoXY(12,16);
446     cout<<"Press p ----> Print Employee PaySlip.";
447     gotoXY(12,18);
448     cout<<"Press q ----> Quit Program.";
449     gotoXY(16,22);
450     cout<<"Select Your Option ==== ";
451 }
452
453 void deletes()
454 {
455     for(int i=0;i<num;i++)
456     {
457         tempemp[i]=emp[i];
458     }
459     //system("cls");
460     borderNoDelay();

```

```

461     int code;
462     int check=-1;
463     gotoXY(28,4);
464     printf("Delete a Record");
465     gotoXY(10,6);
466     cout<<"Enter the JobCode To Delete That Record  :";
467     cin>>code;
468     int i,j;
469     for(i=0;i<=num-1;i++)
470     {
471         if(emp[i].code==code)
472         {
473             check=i;
474         }
475     }
476     if(check!=-1)
477     {
478         for(i=0,j=0;i<=num-1;i++,j++)
479         {
480             if(i==check)
481             {
482                 i++;
483             }
484             emp[j]=tempemp[i];
485         }
486         num--;
487     }
488 }
489
490 void search()
491 {
492     //system("cls");
493     borderNoDelay();
494     int jobcode;
495     bool found = false;
496     gotoXY(10,4);
497     cout<<"You can Search only through the Jobcode of an Employee";
498     gotoXY(10,6);
499     cout<<"Enter Code Of the Employee : ";
500     cin>>jobcode;
501     for(int i=0;i<=num-1;i++)
502     {
503         if(emp[i].code==jobcode)
504         {
505             gotoXY(6,8);
506             cout<<"Name\tCode\tDesignation\tYears (EXP)\tAge\tSalary "<<endl;
507             gotoXY(6,9);
508             cout<<"-----"<<endl;
509             gotoXY(6,11);
510             cout<<emp[i].name;
511             gotoXY(19,11);
512             cout<<emp[i].code;
513             gotoXY(26,11);
514             cout<<emp[i].designation;
515             gotoXY(47,11);
516             cout<<emp[i].exp;
517             gotoXY(58,11);
518             cout<<emp[i].age;
519             gotoXY(66,11);
520             cout<<emp[i].grosspay;
521             found = true;
522         }
523         //else
524         //
525     }
526     if(!found)
527     {
528         gotoXY(26,11);
529         cout<<"No records Found...!!!\a";
530     }
531     getch();
532 }
533
534
535
536 void editmenu()
537 {
538     //system("cls");

```

```

539     borderNoDelay();
540     gotoXY(28,4);
541     printf("Edit An Entry");
542     gotoXY(10,6);
543     cout<<"What Do You Want To edit";
544     gotoXY(12,8);
545     cout<<"n -----> Name ";
546     gotoXY(12,9);
547     cout<<"c -----> Code ";
548     gotoXY(12,10);
549     cout<<"d -----> Designation";
550     gotoXY(12,11);
551     cout<<"e -----> Experience ";
552     gotoXY(12,12);
553     cout<<"a -----> Age";
554     gotoXY(12,13);
555     cout<<"s -----> Salary";
556     gotoXY(12,14);
557     cout<<"q -----> QUIT";
558     gotoXY(10,16);
559     cout<<"Enter Choice ---->> ";
560 }
561
562 void editname(int i)
563 {
564     gotoXY(10,18);
565     cout<<"Enter New Name-----> ";
566     cin>>emp[i].name;
567 }
568
569 void editcode(int i)
570 {
571     gotoXY(10,18);
572     cout<<"Enter New Job Code-----> ";
573     cin>>emp[i].code;
574 }
575 void editdes(int i)
576 {
577     gotoXY(10,18);
578     cout<<"enter new designation-----> ";
579     cin>>emp[i].designation;
580 }
581
582 void editexp(int i)
583 {
584     gotoXY(10,18);
585     cout<<"Enter new Years of Experience";
586     cin>>emp[i].exp;
587 }
588 void editage(int i)
589 {
590     gotoXY(10,18);
591     cout<<"Enter new Age ";
592     cin>>emp[i].age;
593 }
594
595 void editsalary(int i)
596 {
597     int sal, PF, TAX, HRA, MealA, MedicalA, TransportA, LoanBal=emp[i].LoanBalance, LoanDeb, DA;
598     char loan;
599     gotoXY(10,18);
600     cout<<"Enter new Salary ";
601     cin>>sal;
602     DA = 1.20 * sal;
603     TAX = 0.04 * sal;
604     PF = 0.12 * sal;
605     HRA = 4000;
606     MealA = 300;
607     MedicalA = 300;
608     TransportA = 300;
609     LoanDeb = sal * 0.09;
610     if (LoanDeb > LoanBal)
611     {
612         LoanBal = 0;
613         LoanDeb = LoanBal;
614     }
615     emp[i].salary = sal;
616     emp[i].tax=TAX;

```



```

617     emp[i].PF = PF;
618     emp[i].HRA = HRA;
619     emp[i].MealAllowance = MealA;
620     emp[i].MedicalAllowance = MedicalA;
621     emp[i].TransportAllowance = TransportA;
622     emp[i].LoanBalance = LoanBal;
623     emp[i].AnyLoan = loan;
624     emp[i].LoanDebit = LoanDeb;
625     emp[i].grosspay = (sal+MealA+MedicalA+TransportA+HRA+DA) - (PF+TAX+LoanDeb) ;
626 }
627
628 void edit()
629 {
630     //system("cls");
631     borderNoDelay();
632     int jobcode;
633     gotoXY(28,4);
634     printf("Edit a Record");
635     int i;
636     char option;
637     gotoXY(10,6);
638     cout<<"Enter the jobcode To Edit : ";
639     cin>>jobcode;
640     editmenu();
641     for(i=0;i<=num-1;i++)
642     {
643         if(emp[i].code==jobcode)
644         {
645             while((option=cin.get())!='q')
646             {
647                 switch(option)
648                 {
649                     case 'n':
650                         editname(i);
651                         break;
652                     case 'c':
653                         editcode(i);
654                         break;
655                     case 'd':
656                         editdes(i);
657                         break;
658                     case 'e':
659                         editexp(i);
660                         break;
661                     case 'a':
662                         editage(i);
663                         break;
664                     case 's':
665                         editsalary(i);
666                         break;
667                 }
668                 editmenu();
669             }
670         }
671     }
672 }
673
674
675 void displayPayslip()
676 {
677     system("cls");
678     borderNoDelay();
679     gotoXY(10,4);
680     int code,i;
681     cout<<"Enter Employee Job Code :";
682     cin>>code;
683     for(i=0;i<=num-1;i++)
684     {
685         if(emp[i].code==code)
686         {
687             gotoXY(12,6);
688             cout<<"Name : "<<emp[i].name;
689             gotoXY(45,6);
690             cout<<"Working Hours : "<<emp[i].workingHours<<" Hrs";
691             gotoXY(6,8);
692             cout<<"Earnings :-";
693             gotoXY(8,10);
694             cout<<"Basic Pay : "<<emp[i].salary<<endl;

```

```

695         gotoXY(8,12);
696         cout<<"HRA(27% of Basic): "<<emp[i].HRA<<endl;
697         gotoXY(8,14);
698         cout<<"DA (120% of Basic):"<<emp[i].DA;
699         gotoXY(8,16);
700         cout<<"Meal Allowance : "<<emp[i].MealAllowance<<endl;
701         gotoXY(8,18);
702         cout<<"Medical Allowance : "<<emp[i].MedicalAllowance<<endl;
703         gotoXY(8,20);
704         cout<<"Transport Allowance : "<<emp[i].TransportAllowance<<endl;
705         gotoXY(40,8);
706         cout<<"Deductions :- "<<endl<<endl;
707         gotoXY(42,10);
708         cout<<"PF : "<<emp[i].PF<<endl;
709         gotoXY(42,12);
710         cout<<"Tax : "<<emp[i].tax<<endl;
711         gotoXY(42,14);
712         int l = emp[i].AnyLoan;
713         char l2 = toupper(l);
714         cout<<"Loan Status : "<<l2<<endl;
715         gotoXY(42,16);
716         cout<<"Loan Debit This Month : "<<emp[i].LoanDebit<<endl;
717         gotoXY(42,18);
718         cout<<"Loan Balance : "<<emp[i].LoanBalance<<endl;
719         gotoXY(32,22);
720         cout<<"Total Gross Pay : "<<emp[i].grosspay;
721     }
722 }
723 getch();
724 }
725
726
727
728
729
730 int main()
731 {
732     setWindowSize();
733     border();
734     intro();
735     loading();
736     loginFrame();
737     login();
738     menu();
739     getrecords();
740     char option;
741     if(emp[0].code==0 && isFilePresent())
742         num--;
743     while(1)
744     {
745         option=getch();
746         switch(option)
747         {
748             case 'l':
749                 list();
750                 break;
751             case 'i':
752                 insert();
753                 break;
754             case 'd':
755                 deletes();
756                 break;
757             case 'e':
758                 edit();
759                 break;
760             case 's':
761                 search();
762                 break;
763             case 'p':
764                 displayPayslip();
765                 break;
766             case 'q':
767                 saverrecords();
768                 exit(0);
769         }
770         menu();
771     }
772

```

```
773
774     return 0;
775 }
776
```