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OOP ASSINGMENT #1

Introduction: -

Creation of a data base system and storing the data in arrays is what we've done in this assignment. A CS department with 5 sections in it and each section having max 50 students with each student having their attributes and same for the sections in having their own attributes.

TECHNIQUES USED ARE

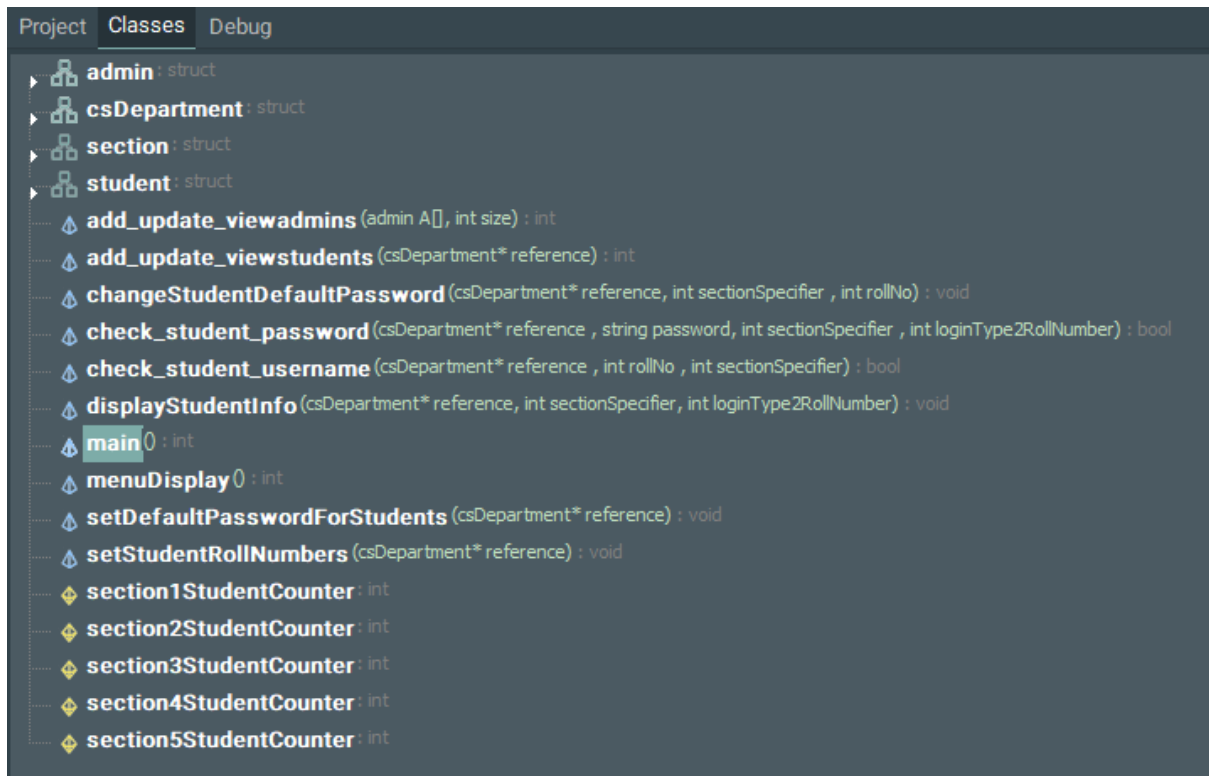
- >Structures
- >Nested Structures
- >Pass By Reference
- >Pass By Value
- >Linear Searching
- >Array Handlings etc.

Then comes the admins that can control everything in this program and can change update and add anything in this database. Admins have their own attributes just like students and sections.

Note: -

This program is tested and all possible errors have been handled till the best of my knowledge. It is made that everyone even a common man can access it made simple and highlighting every choice the user makes.

SUMMARY AS THE IDE SHOWS: -



Code: -

The Code is Given Below in the form of screen shots and in every screen shot I will try to explain what is happening.

```
1  #include<iostream>
2  #include<string.h>
3
4
5  using namespace std;
6
7  int section1StudentCounter = 0;
8  int section2StudentCounter = 0;
9  int section3StudentCounter = 0;
10 int section4StudentCounter = 0;
11 int section5StudentCounter = 0;
12
13
14 struct student{
15     int studentRollNO ;
16     string studentName = "-----";
17     string studentSection = "-----";
18     string studentPassword = "-----";
19
20     void displayStudentInfo(){
21         cout<<"Student Roll No : "<<studentRollNO<<endl;
22         cout<<"Student Name : "<<studentName<<endl;
23         cout<<"Student Section : "<<studentSection<<endl;
24         cout<<"Student Password : "<<studentPassword<<endl<<endl<<endl;
25     }
26 };
27
28
29 struct section{
30     string sectionName = "-----";
31     int noOfStudents = 0;
32     student Students[50];
33 };
34
35 struct csDepartment{
36     section Sections[5];
37
38     void displaySectionNames(){
39         for(int i=0;i<5;i++){
40             cout<<"Section "<<i+1<<" Name is : "<<Sections[i].sectionName<<endl;
41         }
42     }
43 };
44
45
```

->Five Global variable seen at the top is used so that a count is maintained for each section whenever a student is added and that the data base does not override the student that was entered before and adds it on the next slot available.

->These variables by the name of section1StudentCounter as the name specifies makes the program easier in distributing the student to their respective positions in the array and always keeping the count of the students added in each section.

->Then comes the student structure as said with their own attributes and having a display function in the structure that will be needed when displaying the data of each student.

->Then comes the section structure with members as section name and number of students initialized as 0 and all the default names having default values of (-----) so they can be distinguished easily. Other than that section structure having nested structure of the student structure's object which is an array of sized 50 that shows that each section will have 50 students each (MAX).

->Then there is CS Department structure having nested section structure's object which is an array of sized 5 that shoes that the CS department is having 5 sections as said in the assignment that cs department will have only 5 sections. Also, with a display function in the structure that be used when displaying the section names.

```
46 struct admin{
47     string adminName = "-----";
48     string adminDesignation = "-----";
49     string password = "-----";
50
51     void displayInfo(){
52         cout<<"Admin Name : "<<adminName<<endl;
53         cout<<"Admin Designation : "<<adminDesignation<<endl;
54         cout<<"Admin Password : "<<password<<endl<<endl;
55     }
56
57     void displayName(){
58         cout<<"Admin Name : "<<adminName<<endl;
59     }
60 }
61 };
62
63
64 int add_update_viewadmins(admin A[], int size);
65 int add_update_viewstudents(csDepartment* CS);
66 int menuDisplay();
67 bool check_student_username (csDepartment* reference , int rollNo ,int sectionSpecifier);
68 bool check_student_password(csDepartment* reference , string password , int sectionSpecifier , int loginType2RollNumber);
69 void setDefaultPasswordForStudents(csDepartment* reference);
70 void setStudentRollNumbers(csDepartment* reference);
71 void changeStudentDefaultPassword(csDepartment* reference, int sectionSpecifier , int rollNo);
72 void displayStudentInfo(csDepartment* reference,int sectionSpecifier,int loginType2RollNumber);
73
74
```

->This piece of code have an admin structure that have attributes of admin name, admin designation, and password with a display function that will help us in displaying the admin information.

NOTE: Additionally having the display name function that only displays the admin names that will be helpful for us when editing the admins as the user will see the names and update accordingly.

->Then we have a function that takes in perimeter of the array of variable admin and its size and this function is used to add, update, view the admins and their details (PASS BY VALUE IS USED).

->Then we have a function named add update views students that takes in the address of the object named CS which is an object of CS Department structure and performs the operation which is adding updating and viewing student information in the function (THIS IS CALLED PASS BY REFERENCE).

->Then We have a function of menu display that displays the main menu when the user enters the program.

->Then we have 2 functions that checks the student username and student password and returns if it matches or not. The check username function takes the roll number entered by the student and the section entered by the student and checks it and the check password function checks the password by going to the same roll number and section entered by the student and checks whether the password is right or not.

->Next function is setDefaultPasswordForStudents that sets the default password of all the students to student123 as stated in the assignment.

->Next function is setStudentRollNumber that sets the student roll number from 1 to 50 in the array.

->Next function is of changeStudentDefaultPassword that whenever a new student signs in with the default password this function is called and it changes the default password and asks the user to enter the new password as stated as a condition in the assignment.

->Next function is of display student info that displays the student info whenever a students signs in with his credentials and asks the program to display his information.

THE MAIN FUNCTION

```
75 int main(){
76
77     char runAgainOrNo;
78
79     admin A1[5];
80
81     A1[0].adminName = "admin";
82     A1[0].password = "admin";
83
84     csDepartment CS;
85
86     setDefaultPasswordForStudents(&CS);
87
88     setStudentRollNumbers(&CS);
89
90     do{
91
92
93         int loginType;
94         string username;
95         string password;
96
97
98
99
100         loginType = menuDisplay();
101
102         if(loginType==1){
103             cout<<"Enter Your Username : ";
104             fflush(stdin);
105             getline(cin,username); cout<<endl;
106
107             cout<<"Enter Your Password : ";
108             fflush(stdin);
109             getline(cin,password); cout<<endl<<endl;
110
111             if( A1[0].adminName == "admin" && A1[0].password == "admin"){
112
113                 if(password == "admin" && username == "admin"){
114
115                     cout<<"\n"<<endl;
116                     cout<<"You Must Change Your Password"<<endl;
117                     cout<<"\n"<<endl;
118
119                     cout<<"Enter New Password : ";
120                     fflush(stdin);
121                     getline(cin,A1[0].password); cout<<endl;
122
123 }
```

```

124         cout<<"\n"<<endl;
125
126         cout<<" Your Password Has Been Changed." <<endl<<endl;
127         cout<<"Now Sign In Again With Your New Password "<<endl;
128         cout<<"\n"<<endl;
129     }
130 }
131
132
133 else if(username == A1[0].adminName && password == A1[0].password || username == A1[1].adminName && password == A1[1].password || username == A1[2].adminName && password == A1[2].password ||
134
135     cout<<" " <<endl;
136     cout<<" " <<endl;
137     cout<<" Press 1 To Add/Update/View Admins " <<endl;
138     cout<<" Press 2 To Add/Update/View Students " <<endl;
139     cout<<" Press 0 To Logout " <<endl;
140     cout<<" " <<endl<<endl;
141
142     int option2;
143
144     cout<<"Your Option : ";
145     cin>>option2; cout<<endl;
146
147     if(option2 == 1){
148         add_update_viewadmins(A1,5);
149     }
150     else if(option2 == 2){
151         add_update_viewstudents(&CS);
152     }
153 }
154
155 else{
156     cout<<"Wrong Username Or Password"<<endl;
157 }
158
159 }
160
161 else if(loginType==2){
162     int loginType2RollNumber;
163     int sectionSpecifier;
164
165     cout<<"Enter Your rollNumber : ";
166     cin>>loginType2RollNumber;
167
168     cout<<"Enter Your Password : ";
169     fflush(stdin);
170     getline(cin ,password);
171

```

```

172
173     cout<<"Enter Section : 1-5 : ";
174     cin>>sectionSpecifier; cout<<endl;
175
176     if(sectionSpecifier-1 <=4){
177
178         bool checkRollNo = false;
179         bool checkPassword = false;
180
181         checkRollNo = check_student_username(&CS , loginType2RollNumber ,sectionSpecifier);
182         checkPassword = check_student_password(&CS , password ,sectionSpecifier,loginType2RollNumber);
183
184         if(checkRollNo == true && checkPassword ==true){
185             if(CS.Sections[sectionSpecifier-1].Students[loginType2RollNumber-1].studentPassword == "student123"){
186                 changeStudentDefaultPassword(&CS, sectionSpecifier , loginType2RollNumber);
187                 cout<<"\n"<<endl;
188                 cout<<"Now Login Again As Your Password Has Been Updated "<<endl<<endl;
189                 cout<<"\n"<<endl;
190             }
191             else if(CS.Sections[sectionSpecifier-1].Students[loginType2RollNumber-1].studentPassword != "student123"){
192
193                 int studentInfo;
194
195                 cout<<"Press 1 To Access Your Details \nPress 0 To Logout "<<endl;
196                 cin>>studentInfo; cout<<endl;
197
198                 if(studentInfo==1){
199                     displayStudentInfo(&CS,sectionSpecifier,loginType2RollNumber);
200                 }
201             }
202         }
203         else{
204             cout<<"Incorrect Credentials Please Try Again With Correct Credentials"<<endl<<endl;
205         }
206     }
207     else{
208         cout<<"Wrong Section (Section Does Not Exist)"<<endl;
209     }
210 }
211
212 }
213 else{
214     cout<<"Wrong Section (Section Does Not Exist)"<<endl;
215 }
216
217 }
218
219

```

```

220     cout<<"Do You Want To Access the Main Login Menu Again ? : y/n : ";
221     cin>>runAgainOrNo;
222     cout<<"\n"<<endl;
223
224 }
225
226 while(runAgainOrNo == 'y');
227
228 return 0;
229 }
230

```

MAIN FUNCTION ENDS HERE.

DISPLAY MENU FUNCTION IS BELOW: -

```
232 int menuDisplay(){
233
234     int loginType;
235
236     cout<<"<<endl;
237     cout<<"<<endl;
238     cout<<" | Press 1 To Login As Admin | "<<endl;
239     cout<<" | Press 2 To Login As Student | "<<endl;
240     cout<<" | Press 3 To Logout | "<<endl;
241     cout<<" | "<<endl<<endl;
242
243     cout<<"Enter Your Option : ";
244     cin>>loginType; cout<<endl;
245
246     if(loginType == 1){
247         return 1;
248     }
249     else if(loginType == 2){
250         return 2;
251     }
252     else if(loginType == 3){
253         return 3;
254     }
255     else {
256         cout<<"Wrong Input"<<endl;
257     }
258 }
259 }
```

setDefaultPasswordForStudents function and setDefaultRollNumbers function is below: -

```
262 void setDefaultPasswordForStudents(csDepartment* reference){
263     for(int i=0;i<5;i++){
264         for(int k=0;k<50;k++){
265
266             reference->Sections[i].Students[k].studentPassword = "student123";
267         }
268     }
269 }
270
271 void setStudentRollNumbers(csDepartment* reference){
272     for(int i=0;i<5;i++){
273         for(int k=0;k<50;k++){
274
275             reference->Sections[i].Students[k].studentRollNO = k+1;
276         }
277     }
278 }
279
280 }
```

changeStudentDefaultPassword function and displayStudentInfo function is below: -

```

283 void changeStudentDefaultPassword(csDepartment* reference, int sectionSpecifier , int rollNo){
284
285     cout<<"\n"<<endl;
286     cout<<"You Must Change Your Password "<<endl;
287     cout<<" "<<endl<<endl;
288     cout<<"Enter New Password : ";
289     fflush(stdin);
290     getline(cin, reference->Sections[sectionSpecifier-1].Students[rollNo-1].studentPassword);
291     cout<<endl<<endl;
292
293     cout<<"Your Password Has Been Updated Successfully !"<<endl;
294 }
295
296
297
298 void displayStudentInfo(csDepartment* reference,int sectionSpecifier,int loginType2RollNumber){
299     reference->Sections[sectionSpecifier-1].Students[loginType2RollNumber-1].displayStudentInfo();
300 }
301
302
303

```

Add Update View Admins Function Is As Below: -

```

306 int add_update_viewadmins(admin A[], int size){
307     A[size];
308     int option;
309
310
311
312     char yesno;
313
314
315     do{
316
317         cout<<"The Admins Are As Below :-"<<endl<<endl;
318
319         for(int i=0;i<size;i++){
320             cout<<" "<<i+1<<" ";
321             A[i].displayName();
322         }
323
324         cout<<endl<<endl;
325
326         cout<<" "<<endl;
327         cout<<" "<<endl;
328         cout<<" Press 1 To Add Admins "<<endl;
329         cout<<" Press 2 To Update Admins "<<endl;
330         cout<<" Press 3 To View Admins "<<endl;
331         cout<<" Press 4 To Go Back "<<endl;
332         cout<<" "<<endl<<endl;
333
334         cout<<"Enter Your Option : ";
335         cin>>option; cout<<endl;
336
337
338
339         if(option == 1){
340             int numberAdmin;
341
342             cout<<"You Are Currently Adding An Admin :-"<<endl<<endl;
343             cout<<"Enter the Number From The List Above On Which You Want To Add An Admin : ";
344             cin>>numberAdmin;
345
346             if(numberAdmin-1 < 5){
347
348                 if(A[numberAdmin-1].adminName == "-----"){
349
350                     cout<<"Enter the Name Of the New Admin : ";
351                     fflush(stdin);
352                     getline(cin, A[numberAdmin-1].adminName);
353
354

```



```

354     cout<<"Enter the Designation of the New Admin : ";
355     fflush(stdin);
356     getline(cin, A[numberAdmin-1].adminDesignation);
357
358     cout<<"Enter the Password Of the New Admin : ";
359     fflush(stdin);
360     getline(cin, A[numberAdmin-1].password);
361
362
363
364
365 }
366 else {
367     cout<<"You Cannot Add Another Admin On Top Of An Admin"<<endl<<endl;
368 }
369
370 else {
371     cout<<"Cannot Add More then 5 Admins"<<endl<<endl;
372 }
373
374 }
375
376 else if (option == 2){
377
378     int adminNumber;
379     string tempName;
380     string tempDesig;
381     string tempPass;
382
383
384     cout<<"You Are Currently Updating An Admin :-"<<endl<<endl;
385     cout<<"Enter the Number From the List Above That You Want To Update : ";
386     cin>>adminNumber;
387
388     if(adminNumber-1 < 5){
389
390         cout<<"Enter Updated Name : ";
391         fflush(stdin);
392         getline(cin, A[adminNumber-1].adminName);
393
394         cout<<"Enter Updated Designation : ";
395         fflush(stdin);
396         getline(cin, A[adminNumber-1].adminDesignation);
397
398         cout<<"Enter Updated Password : ";
399         fflush(stdin);
400         getline(cin, A[adminNumber-1].password); cout<<endl;
401     }
402

```

```

402
403     else{
404         cout<<"Admin Limit Is 5 Only"<<endl;
405     }
406 }
407 else if(option == 3){
408
409     cout<<"You Are Currently Viewing The Admins Info "<<endl<<endl;
410
411     for(int i=0;i<size;i++){
412         cout<<i+1<<". ";
413         A[i].displayInfo();
414     }
415
416 }
417
418 else if(option == 4){
419     return 1;
420 }
421
422 cout<<"Do You Want To Access the Admin Menu Again ? y/n : ";
423 cin>>yesno; cout<<endl;
424
425 }
426 while(yesno == 'y' || yesno == 'Y');
427
428 return 0;
429 }

```

Add Update view Admins Function Ends Here. ^^

add_update_viewstudents function is as below: -

```
433 int add_update_viewstudents(csDepartment* reference){
434
435     char yesno;
436
437     do{
438
439         int option;
440
441         cout<<"                               "<<endl;
442         cout<<"                               "<<endl;
443         cout<<"    Press 1 To Add A Student          "<<endl;
444         cout<<"    Press 2 To Update A Student       "<<endl;
445         cout<<"    Press 3 To View Students         "<<endl;
446         cout<<"    Press 4 To Update Section Names  "<<endl;
447         cout<<"    Press 5 To Go Back              "<<endl;
448         cout<<"                               "<<endl;
449
450
451         cout<<" Select An Option : ";
452
453         cin>>option;
454
455         int sectionOption;
456
457         if(option == 1){
458
459
460
461             cout<<"There Are 5 Sections :-"<<endl;
462
463             reference->displaySectionNames();
464
465             cout<<"In Which Section Do You Want To Add A Student ? : 1-5 : ";
466             cin>>sectionOption; cout<<endl;
467
468
469             if(sectionOption == 1){
470
471                 cout<<"Enter the Student Name : ";
472                 fflush(stdin);
473                 getline(cin, reference->Sections[sectionOption-1].Students[section1StudentCounter].studentName); cout<<endl;
474
475                 cout<<"Enter the Student Password : ";
476                 fflush(stdin);
477                 getline(cin, reference->Sections[sectionOption-1].Students[section1StudentCounter].studentPassword); cout<<endl;
478
479                 reference->Sections[sectionOption-1].Students[section1StudentCounter].studentSection = reference->Sections[sectionOption-1].sectionName;
480
481                 // reference->Sections[sectionOption-1].Students[section1StudentCounter].studentRollNO = section2StudentCounter;
482
483                 section1StudentCounter++;
484
485             }
486
487             else if(sectionOption == 2){
488
489
490
491                 cout<<"Enter the Student Name : ";
492                 fflush(stdin);
493                 getline(cin, reference->Sections[sectionOption-1].Students[section2StudentCounter].studentName); cout<<endl;
494
495                 cout<<"Enter the Student Password : ";
496                 fflush(stdin);
497                 getline(cin, reference->Sections[sectionOption-1].Students[section2StudentCounter].studentPassword); cout<<endl;
498
499                 reference->Sections[sectionOption-1].Students[section2StudentCounter].studentSection = reference->Sections[sectionOption-1].sectionName;
500
501                 // reference->Sections[sectionOption-1].Students[section2StudentCounter].studentRollNO = section2StudentCounter;
502
503                 section2StudentCounter++;
504
505             }
506             else if(sectionOption == 3){
507                 cout<<"Enter the Student Name : ";
508                 fflush(stdin);
509                 getline(cin, reference->Sections[sectionOption-1].Students[section3StudentCounter].studentName); cout<<endl;
510
511                 cout<<"Enter the Student Password : ";
512                 fflush(stdin);
513                 getline(cin, reference->Sections[sectionOption-1].Students[section3StudentCounter].studentPassword); cout<<endl;
514
515                 reference->Sections[sectionOption-1].Students[section3StudentCounter].studentSection = reference->Sections[sectionOption-1].sectionName;
516
517                 // reference->Sections[sectionOption-1].Students[section3StudentCounter].studentRollNO = section3StudentCounter;
518
519                 section3StudentCounter++;
520
521             }
522             else if(sectionOption == 4){
523                 cout<<"Enter the Student Name : ";
524                 fflush(stdin);
525                 getline(cin, reference->Sections[sectionOption-1].Students[section4StudentCounter].studentName); cout<<endl;
```

```

525         cout<<"Enter the Student Password : ";
526         fflush(stdin);
527         getline(cin, reference->Sections[sectionOption-1].Students[section4StudentCounter].studentPassword); cout<<endl;
528
529         reference->Sections[sectionOption-1].Students[section4StudentCounter].studentSection = reference->Sections[sectionOption-1].sectionName;
530
531         //
532         reference->Sections[sectionOption-1].Students[section4StudentCounter].studentRollNO = section4StudentCounter;
533
534         section4StudentCounter++;
535     }
536     else if(sectionOption == 5){
537         cout<<"Enter the Student Name : ";
538         fflush(stdin);
539         getline(cin, reference->Sections[sectionOption-1].Students[section5StudentCounter].studentName); cout<<endl;
540
541         cout<<"Enter the Student Password : ";
542         fflush(stdin);
543         getline(cin, reference->Sections[sectionOption-1].Students[section5StudentCounter].studentPassword); cout<<endl;
544
545         reference->Sections[sectionOption-1].Students[section5StudentCounter].studentSection = reference->Sections[sectionOption-1].sectionName;
546
547         //
548         reference->Sections[sectionOption-1].Students[section5StudentCounter].studentRollNO = section5StudentCounter;
549
550         section5StudentCounter++;
551     }
552     else {
553         cout<<"Invalid Section There Are Only 5 Sections "<<endl<<endl;
554     }
555 }
556
557
558 else if(option == 2){
559
560     cout<<"In Which Section Do You Want To Update the Student Info ? : 1-5 : ";
561     cin>>sectionOption; cout<<endl;
562
563     if(sectionOption <= 5){
564
565         int studentRollNumber;
566
567         cout<<"On Which Serial Number Do You Want To Update ? : 1-50 : ";
568         cin>>studentRollNumber; cout<<endl;
569
570         if(studentRollNumber <= 50){
571
572             cout<<"Enter the Updated Name Of the Student : ";
573             fflush(stdin);

```

```

573             fflush(stdin);
574             getline(cin, reference->Sections[sectionOption-1].Students[studentRollNumber-1].studentName); cout<<endl;
575
576             cout<<"Enter the Updated Password Of the Student : ";
577             fflush(stdin);
578             getline(cin, reference->Sections[sectionOption-1].Students[studentRollNumber-1].studentPassword); cout<<endl;
579         }
580     }
581     else {
582         cout<<"Wrong Roll Number / Roll Number Does Not Exist"<<endl;
583     }
584 }
585 else {
586     cout<<"Wrong Section Option / Section Does Not Exist "<<endl;
587 }
588
589 }
590 else if(option == 3){
591     cout<<"In Which Section Do You Want To View The Student Info ? : 1-5 : ";
592     cin>>sectionOption; cout<<endl;
593
594     if(sectionOption <= 5){
595
596         for(int i=0;i<50;i++){
597             reference->Sections[sectionOption-1].Students[i].displayStudentInfo();
598         }
599     }
600     else{
601         cout<<"Wrong Section Option / Section Does Not Exist"<<endl;
602     }
603 }
604
605 else if(option == 4){
606
607     int sectionNumber;
608     char yesno;
609
610     do{
611
612         cout<<"Enter the Section Number That You Want To Update Its Name 1-5 :-"<<endl;
613         cin>>sectionNumber; cout<<endl;
614
615         if(sectionNumber-1 < 5){
616
617             cout<<"Enter the Section Name : ";
618             fflush(stdin);
619             getline(cin, reference->Sections[sectionNumber-1].sectionName); cout<<endl<<endl;
620
621

```

```

621
622
623 //setting the section name for every student that the user updated of the section name
624
625 for(int i=0;i<50;i++){
626     reference->Sections[sectionNumber-1].Students[i].studentSection = reference->Sections[sectionNumber-1].sectionName;
627 }
628
629
630 }
631 else{
632     cout<<"Wrong Section Number / Section Does Not Exist"<<endl;
633 }
634
635 cout<<"Do You Want Update Another Section Name ? y/n : ";
636 cin>>yesno; cout<<endl;
637
638 while(yesno == 'y' || yesno == 'Y');
639
640 }
641 else if(option == 5){
642     return 1;
643 }
644
645 cout<<"Do You Want To Access The Student Edit Menu Again ? y/n : ";
646 cin>>yesno; cout<<endl<<endl;
647
648 while(yesno == 'y' || yesno == 'Y');
649
650 return 0;
651 }

```

add_update_viewstudents function ends here. ^^

check_student_username function and check_student_password function is as below: -

```

653
654 bool check_student_username (csDepartment* reference , int rollNo , int sectionSpecifier){
655
656
657     for(int i =0;i<50;i++){
658
659         if( rollNo == reference->Sections[sectionSpecifier-1].Students[i].studentRollNo ){
660             return true;
661         }
662     }
663
664 }
665
666 }
667
668 bool check_student_password(csDepartment* reference , string password, int sectionSpecifier , int loginType2RollNumber){
669
670
671     if( password == reference->Sections[sectionSpecifier-1].Students[loginType2RollNumber-1].studentPassword ){
672         return true;
673     }
674     else{
675         return false;
676     }
677
678 }
679
680 }
681

```

AND THAT IS GONNA BE THE END OF THE CODE SECTION.

OUTPUT: -

```
Press 1 To Login As Admin
Press 2 To Login As Student
Press 3 To Logout

Enter Your Option : 1

Enter Your Username : admin
Enter Your Password : admin

You Must Change Your Password

Enter New Password : hello123

Your Password Has Been Changed.

Now Sign In Again With Your New Password

Do You Want To Access the Main Login Menu Again ? : y/n : y
```

As it accepts the default password and username which is admin and admin it says to change and after it changes it it tells me to sign in again.

Then I Press y to access the menu again and sign in again with my new password which I kept as hello123.

```
Do You Want To Access the Main Login Menu Again ? : y/n : y

| Press 1 To Login As Admin |
| Press 2 To Login As Student |
| Press 3 To Logout |

Enter Your Option : 1

Enter Your Username : admin

Enter Your Password : hello123

| Press 1 To Add/Update/View Admins |
| Press 2 To Add/Update/View Students |
| Press 0 To Logout |

Your Option :
```

After entering my updated credentials, it gives me an option to edit admins, edit students or logout.

```
Press 1 To Login As Admin
Press 2 To Login As Student
Press 3 To Logout
```

Enter Your Option : 1

Enter Your Username : admin

Enter Your Password : hello123

```
Press 1 To Add/Update/View Admins
Press 2 To Add/Update/View Students
Press 0 To Logout
```

Your Option : 1

The Admins Are As Below :-

```
1.Admin Name : admin
2.Admin Name : -----
3.Admin Name : -----
4.Admin Name : -----
5.Admin Name : -----
```

```
Press 1 To Add Admins
Press 2 To Update Admins
Press 3 To View Admins
Press 4 To Go Back
```

Enter Your Option :

When I press 1 it goes in the tab to updating admins and shows me the current admins in the list just for the easiness of the user.

Your Option : 1

The Admins Are As Below :-

```
1.Admin Name : admin
2.Admin Name : -----
3.Admin Name : -----
4.Admin Name : -----
5.Admin Name : -----
```

```
Press 1 To Add Admins
Press 2 To Update Admins
Press 3 To View Admins
Press 4 To Go Back
```

Enter Your Option : 1

You Are Currently Adding An Admin :-

```
Enter the Number From The List Above On Which You Want To Add An Admin : 2
Enter the Name Of the New Admin : Abdul Ghani Khan
Enter the Designation of the New Admin : Senior Admin
Enter the Password Of the New Admin : hello123
Do You Want To Access the Admin Menu Again ? y/n : y
```

The Admins Are As Below :-

```
1.Admin Name : admin
2.Admin Name : Abdul Ghani Khan
3.Admin Name : -----
4.Admin Name : -----
5.Admin Name : -----
```

```
Press 1 To Add Admins
Press 2 To Update Admins
Press 3 To View Admins
Press 4 To Go Back
```

Enter Your Option :

I pressed 1 and added myself on the 2nd number of the list as an admin by the name of Abdul Ghani Khan and kept my password and designation as above.

Then pressed y to access the admin menu again and see it shows me as the second admin

The Admins Are As Below :-

```
1.Admin Name : admin
2.Admin Name : Abdul Ghani Khan
3.Admin Name : -----
4.Admin Name : -----
5.Admin Name : -----
```

```
| Press 1 To Add Admins |
| Press 2 To Update Admins |
| Press 3 To View Admins |
| Press 4 To Go Back |
```

Enter Your Option : 2

You Are Currently Updating An Admin :-

Enter the Number From the List Above That You Want To Update : 1

Enter Updated Name : Sir Usman

Enter Updated Designation : Instructor

Enter Updated Password : hello123

Do You Want To Access the Admin Menu Again ? y/n : y

The Admins Are As Below :-

```
1.Admin Name : Sir Usman
2.Admin Name : Abdul Ghani Khan
3.Admin Name : -----
4.Admin Name : -----
5.Admin Name : -----
```

```
| Press 1 To Add Admins |
| Press 2 To Update Admins |
| Press 3 To View Admins |
| Press 4 To Go Back |
```

Enter Your Option : _

Now this time I pressed 2 to update the admins and I updated the first admin as Sir Usman Wajid and updated the designation and password and then accessed the menu again.

The Admins Are As Below :-

1.Admin Name : Sir Usman
2.Admin Name : Abdul Ghani Khan
3.Admin Name : -----
4.Admin Name : -----
5.Admin Name : -----

Press 1 To Add Admins
Press 2 To Update Admins
Press 3 To View Admins
Press 4 To Go Back

Enter Your Option : 3

You Are Currently Viewing The Admins Info

1.Admin Name : Sir Usman
Admin Designation : Instructor
Admin Password : hello123

2.Admin Name : Abdul Ghani Khan
Admin Designation : Senior Admin
Admin Password : hello123

3.Admin Name : -----
Admin Designation : -----
Admin Password : -----

4.Admin Name : -----
Admin Designation : -----
Admin Password : -----

5.Admin Name : -----
Admin Designation : -----
Admin Password : -----

Do You Want To Access the Admin Menu Again ? y/n :

Now as I pressed 3 this time it shows me all the info of the current admins and as seen it works like a charm.

```
Do You Want To Access the Admin Menu Again ? y/n : y

The Admins Are As Below :-

1.Admin Name : Sir Usman
2.Admin Name : Abdul Ghani Khan
3.Admin Name : -----
4.Admin Name : -----
5.Admin Name : -----

| Press 1 To Add Admins |
| Press 2 To Update Admins |
| Press 3 To View Admins |
| Press 4 To Go Back |

Enter Your Option : 4

Do You Want To Access the Main Login Menu Again ? : y/n : y
```

This time I pressed 4 to go out of the menu and selected y to access the main login menu again

```
| Press 1 To Login As Admin |
| Press 2 To Login As Student |
| Press 3 To Logout |

Enter Your Option : 1

Enter Your Username : Sir Usman

Enter Your Password : hello123

| Press 1 To Add/Update/View Admins |
| Press 2 To Add/Update/View Students |
| Press 0 To Logout |

Your Option : _
```

And this time I used the new credentials that we updated earlier and it lets me in.

Your Option : 2

```
|
| Press 1 To Add A Student
| Press 2 To Update A Student
| Press 3 To View Students
| Press 4 To Update Section Names
| Press 5 To Go Back
|
```

Select An Option : 4

Enter the Section Number That You Want To Update Its Name 1-5 :-

1

Enter the Section Name : Berlin

Do You Want Update Another Section Name ? y/n : y

Enter the Section Number That You Want To Update Its Name 1-5 :-

2

Enter the Section Name : Islamabad

Do You Want Update Another Section Name ? y/n : y

Enter the Section Number That You Want To Update Its Name 1-5 :-

3

Enter the Section Name : Peshawar

Do You Want Update Another Section Name ? y/n : y

Enter the Section Number That You Want To Update Its Name 1-5 :-

4

Enter the Section Name : Karachi

Do You Want Update Another Section Name ? y/n : y

Enter the Section Number That You Want To Update Its Name 1-5 :-

5

Enter the Section Name : MohmandAgency

This time I pressed 2 to edit student info and updated all the sections name as above.

```
Do You Want Update Another Section Name ? y/n : n
Do You Want To Access The Student Edit Menu Again ? y/n : y

| Press 1 To Add A Student |
| Press 2 To Update A Student |
| Press 3 To View Students |
| Press 4 To Update Section Names |
| Press 5 To Go Back |

Select An Option : 1
There Are 5 Sections :-

Section 1 Name is : Berlin
Section 2 Name is : Islamabad
Section 3 Name is : Peshawar
Section 4 Name is : Karachi
Section 5 Name is : MohmandAgency
In Which Section Do You Want To Add A Student ? : 1-5 : 1

Enter the Student Name : Abdul Ghani Khan

Enter the Student Password : hello123

Do You Want To Access The Student Edit Menu Again ? y/n :
```

Now Im accessing the student edit menu again and adding a student in section 1 which is berlin by the name of Abdul Ghani Khan and setting his password by hello123.

```
Do You Want To Access The Student Edit Menu Again ? y/n : y
```

```
Press 1 To Add A Student  
Press 2 To Update A Student  
Press 3 To View Students  
Press 4 To Update Section Names  
Press 5 To Go Back
```

```
Select An Option : 3
```

```
In Which Section Do You Want To View The Student Info ? : 1-5 : 1
```

```
Student Roll No : 1  
Student Name : Abdul Ghani Khan  
Student Section : Berlin  
Student Password : hello123
```

```
Student Roll No : 2  
Student Name : -----  
Student Section : Berlin  
Student Password : student123
```

```
Student Roll No : 3  
Student Name : -----  
Student Section : Berlin  
Student Password : student123
```

As now I have accessed the menu again and pressed 3 to access the view students and then selected for section 1 which is Berlin

The student List for all the students in that section is opened which is from 1 to 50 and as we can see we had added a student named Abdul Ghani Khan before it shows it on the first slot with their full info and the rest are empty with their default password as said in the instructions.

So Now We Have Abdul Ghani Khan On Roll Number 1 Of section 1 Which is Berlin.

```
Student Roll No : 49  
Student Name : -----  
Student Section : Berlin  
Student Password : student123
```

```
Student Roll No : 50  
Student Name : -----  
Student Section : Berlin  
Student Password : student123
```

```
Do You Want To Access The Student Edit Menu Again ? y/n : n
```

```
Do You Want To Access the Main Login Menu Again ? : y/n : y
```

```
| Press 1 To Login As Admin  
| Press 2 To Login As Student  
| Press 3 To Logout
```

```
Enter Your Option :
```

I made my way back to the main menu .

```
| Press 1 To Login As Admin |
| Press 2 To Login As Student |
| Press 3 To Logout |
|
Enter Your Option : 2

Enter Your RollNumber : 1
Enter Your Password : hello123
Enter Section : 1-5 : 1

Press 1 To Access Your Details
Press 0 To Logout
1

Student Roll No : 1
Student Name : Abdul Ghani Khan
Student Section : Berlin
Student Password : hello123

Do You Want To Access the Main Login Menu Again ? : y/n : _
```

I selected 2 from the main menu and entered the credentials of the student that we added earlier when we accessed the admin menu.

Then pressed 1 to access the student details and see it shows the info of the student that signed in.


```
Do You Want To Access the Main Login Menu Again ? : y/n : y
```

```
| Press 1 To Login As Admin |  
| Press 2 To Login As Student |  
| Press 3 To Logout |
```

```
Enter Your Option : 2
```

```
Enter Your RollNumber : 2
```

```
Enter Your Password : student123
```

```
Enter Section : 1-5 : 1
```

```
You Must Change Your Password
```

```
Enter New Password : hello123
```

```
Your Password Has Been Updated Successfully !
```

```
Now Login Again As Your Password Has Been Updated
```

```
Do You Want To Access the Main Login Menu Again ? : y/n : _
```

Now I accessed the main menu again and pressed 2 to login as a student and this time I signed in as a default student as in section 1 there is no student on roll number 2 so as the assignment said to make the default password as student123 so I entered roll number 2 and default password as student123

After which it tells me to change the password so I changed it and wrote hello123.

Your Password Has Been Updated Successfully !

Now Login Again As Your Password Has Been Updated

Do You Want To Access the Main Login Menu Again ? : y/n : y

Press 1 To Login As Admin
Press 2 To Login As Student
Press 3 To Logout

Enter Your Option : 2

Enter Your RollNumber : 2

Enter Your Password : hello123

Enter Section : 1-5 : 1

Press 1 To Access Your Details

Press 0 To Logout

1

Student Roll No : 2

Student Name : -----

Student Section : Berlin

Student Password : hello123

Do You Want To Access the Main Login Menu Again ? : y/n :

Now I accessed the menu again and accessed roll number 2 of section 1 with the new credentials and see it lets me in.

It Doesn't shows the name as we haven't updated his name and AS THE ASSIGNMENT SAID THAT STUDENT CAN ONLY VIEW HIS DETAILS.

So now im gonna update the student roll number 2 and then come back sign in with the updated details.

```
| Press 1 To Login As Admin |  
| Press 2 To Login As Student |  
| Press 3 To Logout |
```

Enter Your Option : 1

Enter Your Username : Abdul Ghani Khan

Enter Your Password : hello123

```
| Press 1 To Add/Update/View Admins |  
| Press 2 To Add/Update/View Students |  
| Press 0 To Logout |
```

Your Option : 2

```
| Press 1 To Add A Student |  
| Press 2 To Update A Student |  
| Press 3 To View Students |  
| Press 4 To Update Section Names |  
| Press 5 To Go Back |
```

Select An Option : 2

In Which Section Do You Want To Update the Student Info ? : 1-5 : 1

On Which Serial Number Do You Want To Update ? : 1-50 : 2

Enter the Updated Name Of the Student : Uzair

Enter the Updated Password Of the Student : hello123

Do You Want To Access The Student Edit Menu Again ? y/n : n

```
| Press 1 To Login As Admin |
| Press 2 To Login As Student |
| Press 3 To Logout |
Enter Your Option : 2
Enter Your RollNumber : 2
Enter Your Password : hello123
Enter Section : 1-5 : 1
Press 1 To Access Your Details
Press 0 To Logout
1
Student Roll No : 2
Student Name : Uzair
Student Section : Berlin
Student Password : hello123
Do You Want To Access the Main Login Menu Again ? : y/n : _
```

Now after updating his name through the admin we can see his details now.

```
Do You Want To Access the Main Login Menu Again ? : y/n : n
```

The program exits after entering n when it asked do you want to access the main login menu again.

THE END. THANK YOU