



Bangladesh University of Business and Technology
Mirpur-2, Dhaka, Bangladesh

Student Quiz System

Group 5

Group Member 1:MD.Ashikur Rahman

Group Member 2:Tasmiah Binte Azad

Group Member 3:Kaspia Alam

Group Member 4:Mirza Niaz Morshed

Group Member 5:Fairuz Tasnim

Submitted to: Humayra Ahmed

Lecturer, Dept. of CSE

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Introduction:

This 'QUIZ GAME' Project is designed for a student in which you can generate and manage a simple database for questions. The question's number is randomly generated by the software and is stored in a binary file by the name 'random'. This database is basically used as a MASTER file to be used as a look-up table for information like Quiz Option, SubMenu, either CSE/EEE/ENGLISH, or General, and the Return. In this software, you can ask for any Menu based on the Menu Question that will be asked to the user the user gets 4 choices for answering the question. If the user is correct then he will get the confirmation that his answer to that question is correct. If he is incorrect then he will get a confirmation that his answer to that question is incorrect and the correct answer will be visible. After all, the question is answered the student will get the result.

1 Objectives :

1. To manage details of a student(name,id,department)
2. To add a submenu for the quiz
3. To make quizzes for three different subjects
4. To make an easy-to-use interface to answer the questions
5. To make the quiz multiple choice question and randomly generate the order in which the question appears
6. Add 6 questions to each subject
7. to make it easier for the student to answer the questions by simply typing an option.
8. Make a result menu after each quiz ends
9. Display student information and student's performance
10. To save time and resources.

2 Code

```
here quizproject.cpp
1  #include<iostream>
2  #include<conio.h>
3  #include<windows.h>
4  #include<stdlib.h>
5
6  using namespace std;
7  struct student{
8      char name[20],id[20],department[20];
9      int marks,random;
10 };
11 student st;
12 void CSE(){
13     system("CLS");
14     cout<<"\t\tCSE Quiz"<<endl;
15     char choice;
16     st.marks=0;
17     int i=0,arr[5];
18     while(i<6){
19         back:
20         st.random=rand()%6;
21         for(int j=0;j<=5;j++){
22             if(st.random==arr[j]){
23                 goto back;
24             }
25         }
26     }
27     arr[i]=st.random;
28     switch(st.random){
29
30     case 0:
31         cout<<i+1<<"Which of the following is not a programming language?"<<endl;
32         cout<<"A.Java ";<<endl;
33         cout<<"B.Python ";<<endl;
34         cout<<"C.Basic ";<<endl;
35         cout<<"D. C++"<<endl;
36         choice=getch();
37         if(choice=='c' || choice=='C'){
38             cout<<"Your answer is correct"<<endl<<endl;
39             st.marks++;
40         }
41         else{
42             cout<<"Your answer is incorrect"<<endl;
43             cout<<"The correct answer is c"<<endl<<endl;
44         }
45     }
```

```

57     }
58     else{
59         cout<<"Your answer is incorrect"<<endl;
60         cout<<"The correct answer is d"<<endl<<endl;
61     }
62     break;
63     case 2:
64         cout<<i+1<<"which operator can not be overloaded?"<<endl;
65         cout<<"A. ==(Equal equal)"<<endl;
66         cout<<"B. ?: (Conditional operator)"<<endl;
67         cout<<"C. +(Addition) "<<endl;
68         cout<<"D. %(Modulus)"<<endl;
69         choice=getch();
70         if(choice=='B' || choice=='b'){
71             cout<<"Your answer is correct"<<endl<<endl;
72             st.marks++;
73         }
74         else{
75             cout<<"Your answer is incorrect"<<endl;
76             cout<<"The correct answer is b"<<endl<<endl;
77         }
78         break;
79         case 3:
80         cout<<i+1<<"Which of the following is called address operator?"<<endl;
81         cout<<"A. * "<<endl;
82         cout<<"B. & "<<endl;
83         cout<<"C. ! "<<endl;
84         cout<<"D. @ "<<endl;
85         choice=getch();
86         if(choice=='B' || choice=='b'){
87             cout<<"Your answer is correct"<<endl<<endl;
88             st.marks++;

```



```

88         st.marks++;
89     }
90     else{
91         cout<<"Your answer is incorrect"<<endl;
92         cout<<"The correct answer is b"<<endl<<endl;
93     }
94     break;
95     case 4:
96     cout<<i+1<<"Who created C++?"<<endl;
97     cout<<"A. Bjarne Stroustrup "<<endl;
98     cout<<"B. Dennis Ritchie "<<endl;
99     cout<<"C. Ken thompson "<<endl;
100    cout<<"D. Brian kernighan "<<endl;
101    choice=getch();
102    if(choice=='D' || choice=='d'){
103        cout<<"Your answer is correct"<<endl<<endl;
104        st.marks++;
105    }
106    else{
107        cout<<"Your answer is incorrect"<<endl;
108        cout<<"The correct answer is d"<<endl<<endl;
109    }
110    break;
111    case 5:
112    cout<<i+1<<"Which is the following user header file extenson used in C++?"<<endl;
113    cout<<"A. hg "<<endl;
114    cout<<"B. cpp"<<endl;
115    cout<<"C. h "<<endl;
116    cout<<"D. hf "<<endl;
117    choice=getch();
118    if(choice=='b' || choice=='B'){
119        cout<<"Your answer is correct"<<endl<<endl;
120        st.marks++;

```

```

121     }
122     else{
123         cout<<"Your answer is incorrect"<<endl;
124         cout<<"The correct answer is b"<<endl<<endl;
125     }
126     break;
127 }
128 i++;
129 }
130
131 }
132 void English() {
133     system("CLS");
134     cout<<"\t\tEnglish"<<endl;
135     cout<<"Fill in the blanks with appropriate words"<<endl<<endl;
136     char choice;
137     st.marks=0;
138     int i=0,arr[5];
139     while(i<6 ) {
140         back:
141         st.random=rand()%6;
142         for(int j=0;j<=5;j++) {
143             if(st.random==arr[j]) {
144                 goto back;
145             }
146         }
147
148         arr[i]=st.random;
149         switch(st.random) {
150             case 0:

```

```

151     cout<<i+1<<"My grandmother used to make her children        up their
152     cout<<"A. make"<<endl;
153     cout<<"B. to make"<<endl;
154     cout<<"C. to do "<<endl;
155     cout<<"D. made"<<endl;
156     choice=getch();
157     if(choice=='A' || choice=='a'){
158         cout<<"Your answer is correct"<<endl<<endl;
159         st.marks++;
160     }
161     else{
162         cout<<"Your answer is incorrect"<<endl;
163         cout<<"The correct answer is a"<<endl<<endl;
164     }
165     break;
166     case 1:
167         cout<<i+1<<"Hang       ! I'll be there with you in an hour"<<endl;
168         cout<<"A. a little"<<endl;
169         cout<<"B. down there"<<endl;
170         cout<<"C. in there "<<endl;
171         cout<<"D. more "<<endl;
172         choice=getch();
173         if(choice=='C' || choice=='c'){
174             cout<<"Your answer is correct"<<endl<<endl;
175             st.marks++;
176         }
177         else{
178             cout<<"Your answer is incorrect"<<endl;
179             cout<<"The correct answer is c"<<endl<<endl;
180         }
181     }
182

```

```

182         }
183         break;
184         case 2:
185             cout<<i+1<<"When making beer,barley is _____ to bring out it's swee
186             cout<<"A. germinated"<<endl;
187             cout<<"B. malting "<<endl;
188             cout<<"C. growing"<<endl;
189             cout<<"D. produced "<<endl;
190             choice=getch();
191             if(choice=='a' || choice=='A'){
192                 cout<<"Your answer is correct"<<endl<<endl;
193                 st.marks++;
194             }
195             else{
196                 cout<<"Your answer is incorrect"<<endl;
197                 cout<<"The correct answer is a"<<endl<<endl;
198             }
199             break;
200             case 3:
201                 cout<<i+1<<"You _____ her with my son,He was with me all the time.
202                 cout<<"A. may have seen"<<endl;
203                 cout<<"B. mustn't see"<<endl;
204                 cout<<"C. can't have seen "<<endl;
205                 cout<<"D. should see"<<endl;
206                 choice=getch();
207                 if(choice=='c' || choice=='C'){
208                     cout<<"Your answer is correct"<<endl<<endl;
209                     st.marks++;
210                 }
211                 else{
212                     cout<<"Your answer is incorrect"<<endl;
213                     cout<<"The correct answer is c"<<endl<<endl;
214

```

```

215
216         }
217         break;
218         case 4:
219             cout<<i+1<<"Children need to have their imagination           "<<endl;
220             cout<<"A. impacted"<<endl;
221             cout<<"B. simulated "<<endl;
222             cout<<"C. stimulated "<<endl;
223             cout<<"D. feigned "<<endl;
224             choice=getch();
225             if(choice=='c' || choice=='C'){
226                 cout<<"Your answer is correct"<<endl<<endl;
227                 st.marks++;
228             }
229             else{
230                 cout<<"Your answer is incorrect"<<endl;
231                 cout<<"The correct answer is c"<<endl<<endl;
232             }
233             break;
234             case 5:
235                 cout<<i+1<<"I got a            box for my birthday."<<endl;
236                 cout<<"A. white small wooden"<<endl;
237                 cout<<"B. small white wooden "<<endl;
238                 cout<<"C. small wooden white "<<endl;
239                 cout<<"D. wooden small white "<<endl;
240                 choice=getch();
241                 if(choice=='B' || choice=='b'){
242                     cout<<"Your answer is correct"<<endl<<endl;
243                     st.marks++;
244                 }
245                 else{
246                     cout<<"Your answer is incorrect"<<endl;

```

```

247         cout<<"The correct answer is b"<<endl<<endl;
248
249     }
250     break;
251
252 }
253 i++;
254 }}
255 void EEE() {
256     system("CLS");
257     cout<<"\t\tEEE Quiz"<<endl;
258     char choice;
259     st.marks=0;
260     int i=0,arr[5];
261     while(i<6 ) {
262         back:
263         st.random=rand()%6;
264         for(int j=0;j<=6;j++) {
265             if(st.random==arr[j]) {
266                 goto back;
267             }
268         }
269
270         arr[i]=st.random;
271         switch(st.random) {
272             case 0:
273                 cout<<i+1<<"The reciprocal of resistance is : ?"<<endl;
274                 cout<<"A. Voltage"<<endl;
275                 cout<<"B. Current"<<endl;
276                 cout<<"C. Conductance "<<endl;
277                 cout<<"D. Coulombs"<<endl;
278                 choice=getch();
279                 if(choice=='C' || choice=='c') {

```

```

280         cout<<"Your answer is correct"<<endl<<endl;
281         st.marks++;
282     }
283     else{
284         cout<<"Your answer is incorrect"<<endl;
285         cout<<"The correct answer is c"<<endl<<endl;
286     }
287     }
288     break;
289     case 1:
290     cout<<i+1<<"Capacitance is measured in : ?"<<endl;
291     cout<<"A. Coulombs "<<endl;
292     cout<<"B. Joules"<<endl;
293     cout<<"C. Henrys"<<endl;
294     cout<<"D. Farads"<<endl;
295     choice=getch();
296     if(choice=='D' || choice=='d'){
297         cout<<"Your answer is correct"<<endl<<endl;
298         st.marks++;
299     }
300     else{
301         cout<<"Your answer is incorrect"<<endl;
302         cout<<"The correct answer is d"<<endl<<endl;
303     }
304     }
305     break;
306     case 2:
307     cout<<i+1<<"An RC circuit has R=2 ohm and C=4F,what's the time con
308     cout<<"A. 0.5 s"<<endl;
309     cout<<"B. 2 s"<<endl;
310     cout<<"C. 4 s"<<endl;
311     cout<<"D. 8 s"<<endl;
312     choice=getch();

```

```

313     if(choice=='D' || choice=='d'){
314         cout<<"Your answer is correct"<<endl<<endl;
315         st.marks++;
316     }
317     else{
318         cout<<"Your answer is incorrect"<<endl;
319         cout<<"The correct answer is d"<<endl<<endl;
320
321         }
322         break;
323         case 3:
324             cout<<i+1<<"The imaginary part of impedance is called : ?"<<endl;
325             cout<<"A. resistance "<<endl;
326             cout<<"B. conductance"<<endl;
327             cout<<"C. reactance "<<endl;
328             cout<<"D. admittance"<<endl;
329             choice=getch();
330             if(choice=='C' || choice=='c'){
331                 cout<<"Your answer is correct"<<endl<<endl;
332                 st.marks++;
333             }
334             else{
335                 cout<<"Your answer is incorrect"<<endl;
336                 cout<<"The correct answer is c"<<endl<<endl;
337
338                 }
339                 break;
340                 case 4:
341                     cout<<i+1<<"The two input terminals of an op amp are labeled as :
342                     cout<<"A. high and low"<<endl;
343                     cout<<"B. positive and negative "<<endl;
344                     cout<<"C. inverting and non inverting "<<endl;
345                     cout<<"D. differential and nondifferential"<<endl;

```



```

346 choice=getch();
347 if(choice=='c' || choice=='C'){
348     cout<<"Your answer is correct"<<endl<<endl;
349     st.marks++;
350 }
351 else{
352     cout<<"Your answer is incorrect"<<endl;
353     cout<<"The correct answer is c"<<endl<<endl;
354 }
355 break;
356 case 5:
357     cout<<i+1<<"Which of these amplifiers is used in a digital to anal
358     cout<<"A. noninverter"<<endl;
359     cout<<"B. voltage follower"<<endl;
360     cout<<"C. summer"<<endl;
361     cout<<"D. difference amplifier"<<endl;
362     choice=getch();
363     if(choice=='D' || choice=='d'){
364         cout<<"Your answer is correct"<<endl<<endl;
365         st.marks++;
366     }
367     else{
368         cout<<"Your answer is incorrect"<<endl;
369         cout<<"The correct answer is d"<<endl<<endl;
370     }
371     break;
372 }
373 }
374 }
375 }
376 }
377 i++;
378 }

```

```

379     }
380     void result() {
381         float percentage=0;
382         cout<<"\n\n\t\t*****"<<endl;|
383             cout<<"\t\t Student Quiz's Result"<<endl;
384             cout<<"\t\t*****"<<endl;
385         cout<<"Student's name: "<<st.name<<endl;
386         cout<<"Student's id: "<<st.id<<endl;
387         cout<<"Student's department: "<<st.department<<endl;
388         cout<<"Student's obtained marks: "<<st.marks<<" out of 6"<<endl;
389         percentage=100*st.marks/6;
390         cout<<"percentage: "<<percentage<<"%"<<endl;
391         if (percentage>=50) {
392             cout<<"Status: Passed"<<endl;
393         }
394         else{
395             cout<<"Status: Failed"<<endl;
396         }
397     }
398 }
399 int main() {
400     char press,select;
401     do{
402         system("Cls");
403         cout<<"\n\n\t\t*****"<<endl;
404         cout<<"\t\t Student Quiz "<<endl;
405         cout<<"\t\t*****"<<endl;
406         cout<<"\t\tEnter student name: ";
407         gets(st.name);
408         cout<<"\t\tEnter roll no: ";

```

```

409         cout<<"\t\tEnter department name: ";
410         gets(st.department);
411         system("CLS");
412         cout<<"\t\tMarks less than 50% will be considered as fail"<<endl;
413         cout<<"Select which subject you want to take a quiz on"<<endl;
414         cout<<"1) CSE"<<endl;
415         cout<<"2) English"<<endl;
416         cout<<"3) EEE"<<endl;
417         select=getch();
418         switch(select){
419             case '1':
420                 CSE();
421                 result();
422                 break;
423             case '2':
424                 English();
425                 result();
426                 break;
427             case '3':
428                 EEE();
429                 result();
430                 break;
431             default:
432                 cout<<"Invalid input"<<endl;
433                 break;
434         }
435         cout<<"Press C to continue or any key to terminate"<<endl;
436         press=getch();
437         system("CLS");
438
439     }while (press=='c' || press=='C');
440 }
441

```

3 Description

3.1 getch()

getch():getch() is a nonstandard function and is present in conio.h header file. getch() reads a single character from the keyboard. But it does not use any buffer, so the entered character is immediately returned without waiting for the enter key.

3.2 switch(case)

We used switch case to watch between the three subjects. A switch statement allows a variable to be tested for equality against a list of values. each value is called a case, and the variable being switched on is checked for each switch case.

3.3 CSE()

The cse function here represents the quiz of cse. It has six questions that we can access by applying the switch statement. And after using getch() function we can see if our answer is correct or incorrect. The order of the question is also the same every time, we used rand() function to randomly select a question.

3.4 English()

The English function here represents the fill in the blanks of English. It has six questions that we can access by applying the switch statement. And after using getch() function we can see if our answer is correct or incorrect. The order of the question is also the same every time, we used rand() function to randomly select a question.

3.5 `EEE()`

The `EEE` function here represents the quiz of `EEE`. It has six questions that we can access by applying the switch statement. And after using `getch()` function we can see if our answer is correct or incorrect. The order of the question is also the same every time, we used `rand()` function to randomly select a question.

3.6 `result()`

The result function gives us the result after each quiz is taken. First, it will show the details of the student then It will tell us how many of the answers were correct and how many were incorrect. it will also show us our percentage and whether the student has passed or failed.

3.7 `rand()`

`rand()` : this `rand()` function helps us to randomly select a question so that after a student has taken the quiz, the next student will face the questions in a different sequence. how this function works is it will give us a random number and that will be the number of the question. since we only have 6 questions we used `rand()%(modulus)6` so that the randomly generated numbers are between one to six.

4 Output

```
*****  
Student Quiz  
*****  
Enter student name: Ashikur Rahman  
Enter roll no: 471  
Enter department name: CSE
```

```
Marks less than 50% will be considered as fail
```

```
Select which subject you want to take a quiz on
```

- 1) CSE
- 2) English
- 3) EEE

CSE Quiz

1)Which is the following user header file extenson used in C++

- A. hg
- B. cpp
- C. h
- D. hf

Your answer is incorrect

The correct answer is b

2)Who created C++?

- A. Bjarne Stroustrup
- B. Dennis Ritchie
- C. Ken thompson
- D. Brian kernighan

Your answer is incorrect

The correct answer is d

3)which operator can not be overloaded?

- A. ==(Equal equal)
- B. ?:(Conditional operator)
- C. +(Addition)
- D. %(Modulus)

Your answer is incorrect

The correct answer is b

4)Which ot the following type is provided by C++ but not C

- A.double
- B.float
- C.int
- D.bool

English

Fill in the blanks with appropriate words

1) You _____ her with my son, He was with me all the time.

- A. may have seen
- B. mustn't see
- C. can't have seen
- D. should see

Your answer is incorrect

The correct answer is c

2) When making beer, barley is _____ to bring out its sweetness.

- A. germinated
- B. malting
- C. growing
- D. produced

Your answer is incorrect

The correct answer is a

3) Children need to have their imagination _____

- A. impacted
- B. simulated
- C. stimulated
- D. feigned

Your answer is incorrect

The correct answer is c

4) I got a _____ box for my birthday.

- A. white small wooden
- B. small white wooden
- C. small wooden white
- D. wooden small white

Your answer is incorrect

EEE Quiz

1)Capacitance is measured in : ?

- A. Coulombs
- B. Joules
- C. Henrys
- D. Farads

Your answer is incorrect

The correct answer is d

2)Which of these amplifiers is used in a digital to analog converter?

- A. noninverter
- B. voltage follower
- C. summer
- D. difference amplifier

Your answer is incorrect

The correct answer is d

3)The imaginary part of impedance is called : ?

- A. resistance
- B. conductance
- C. reactance
- D. admittance

Your answer is incorrect

The correct answer is c

4)An RC circuit has $R=2\text{ ohm}$ and $C=4\text{F}$, what's the time constant?

- A. 0.5 s
- B. 2 s
- C. 4 s
- D. 8 s

Your answer is incorrect

The correct answer is d

Student Quiz's Result

Student's name: Ashikur Rahman

Student's id: 471

Student's department: CSE

Student's obtained marks: 3 out of 6

percentage: 50%

Status: Passed

Press C to continue or any key to terminate

5 Software and Technology used

Software:

Code::blocks IDE

Windows 10

Technology:

C++: C++ is an object-oriented programming language. It is a superset of C language. C++ adds a number of object-oriented features such as object inheritance, function overloading, and operator overloading to C. C++ is a versatile language for handling very large programs. C++ can be used to build a variety of systems such as editor, compiler, database, communication systems.

C++ is easily maintainable and expandable

6 Discussions

We have achieved to create a program that will simultaneously manage a student's data and take a quiz on three different subjects. the student can now select a subject to take a quiz on and very easily take the quiz by performing a simple task like pressing the option on the keyboard .everytime a question arrives the student can see if his answer is correct or incorrect. if incorrect the student can now see the correct answer too .after that we managed to create a window that displays the details of the student and the performance of the student in the quiz. Here marks less than 50 percent of the total marks are considered as fail. we have managed to develop a program that is easy to use and effective to save time and resources. the teacher will not have to waste a lot of time and energy taking a quiz for each student, also it is a very good initiative to save paper which contributes to our environment.