**Design Document**

**Overview**

My Idea for this program was to do an exam study practice/review program for anybody in the ICS3U3 course. I want my program to have multiple choice questions for different things we learned over the course. The units included are loops, switch statements, primitive types, object types, string methods boolean expressions, debugging and random numbers. The main purpose is to just give you a refresher on some of the topics that we have been through during the semester. The user will start by picking a topic for the quiz to practice on and then they will go through a series of questions from those questions. At the end of the program, it will tell the user what their score of how many questions they got right. This program is designed for 1 player.

**User’s Perspective**

Hello User! What category would you like to practice for?

1. Loops B. If statements C.String Methods

Okay! Loops it is…

Q: A loop that repeats a specific number of times is known as a \_\_\_

1. Infinite Loop B. Conditional Loop

C. Sentinel Loop D. Counted Loop

D

You are correct

Q: In all but rare cases Loops must contain within themselves

1. Arithmetic statement B. Nested loops

C. A way to terminate D. An if-statement

B

Wrong answer, The correct answer is C.

Your score is ½

Would you like to Try again?

**Method List**

Main method

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Loop quiz Math class Data types Boolean expression

string loopQuiz(String [ ] quiz, String [ ] answer, String[ ] [ ] choices)

Description: This method is filled with question and answers and choices based on a loop genre.

string mathClassQuiz(String [ ] quiz, String [ ] answer, String[ ] [ ] choices)

Description: This method is filled with question and answers and choices based on a math Class,string methods and switch statement genre.

string dataTypesQuiz(String [ ] quiz, String [ ] answer, String[ ] [ ] choices)

Description: This method is filled with question and answers and choices based on a primitive data and objects genre.

string boolean Quiz(String [ ] quiz, String [ ] answer, String[ ] [ ] choices)

Description: This method is filled with question and answers and choices based on a boolean genre.

**Pseudo code**

Main method

Print (“Welcome statement”);

Do{

Ask user what topic they would like to study for as a multiple choice question

Int userInput=sc.nextInt;

Int question=1;

If (userInput=0){

for(int counter=loopQuiz(quiz).length;counter==0;counter--){

loopQuiz(quiz)[question];

loopQuiz (choices)[question];

Int userAnswer=sc.nextInt;

If userAnswer=loopQuiz(answer)[question]{

print(“correct”);

}

Else{

print(“incorrect”);

}

question++;

}

}

Else if (userInput=2){

for(int counter=mathClass(quiz).length;counter==0;counter--){

mathClass(quiz)[question];

mathClass(choices)[question];

Int userAnswer=sc.nextInt;

If userAnswer=mathClass(answer)[question]{

print(“correct”);

}

Else{

print(“incorrect”);

}

question++;

}

}

Else if (userInput=3){

for(int counter=primitiveData(quiz).length;counter==0;counter--){

question=1;

primitiveData (quiz)[question];

primitiveData (choices)[question];

Int userAnswer=sc.nextInt;

If userAnswer=primitiveData(answer)[question]{

print(“correct”);

}

Else{

print(“incorrect”);

}

question++;

}

}

Else {

for(int counter=booleanExpressions(quiz).length;counter==0;counter--){

booleanExpressions(quiz)[question];

booleanExpressions(choices)[question];

Int userAnswer=sc.nextInt;

If userAnswer=booleanExpressions(answer)[question]{

print(“correct”);

}

Else{

print(“incorrect”);

}

question++;

}

}

Print (“would you like to try again”);

String restart =sc.readline;

}while(restart.equalsIgnoreCase(“yes”))