CSE 310 Online A2/B2: Extension of Loops

Time: 30 minutes

June 2025

1 Objective

In this task, you will extend your offline to handle do-while loops. Moreover, break and continue statements will be allowed.

2 Requirements

- Extend your code for handle do-while loops and break and continue statements inside loops

- We need semantic checking. Throw an error if the break or continue statements is outside any loop.

- You need to include the new rules similarly as other statements in log.txt and errors in error.txt as shown below.

Hopefully you understand, yOu need to extend your grammar. You will get all the necessary symbols from the lexer for this assignment. Use it to write rules.

Sample Input

```
int var(int a, int b){
        return a+b;
}


int main(){
        float d;
        d=var(1,2*3)+3.5*2;

        int i = 0;
```

```
        do {
        if (i == 3)break;
        i++;
        } while (i < 5);


        return 0;
}
```

Expected Log Output

```
.
.
Line No. 14: The  new rule you wrote that matched
do {
    if (i == 3)break;
    i++;
} while (i < 5);
.
.
```

Sample Input

```
int var(int a, int b){
        return a+b;
}


int main(){
        float d;
        d=var(1,2*3)+3.5*2;

        int i = 0;
        continue;
        break;

        return 0;
}
```

Expected Error Output

```
Line No. 11: Continue outside loop
Line No. 12: Break outside loop
```

3 Marks Distribution

- Parsing without error - 7

- Detecting errors - 3

4 Submission Instructions

- Submit only your 21XXXXX.g4 file.