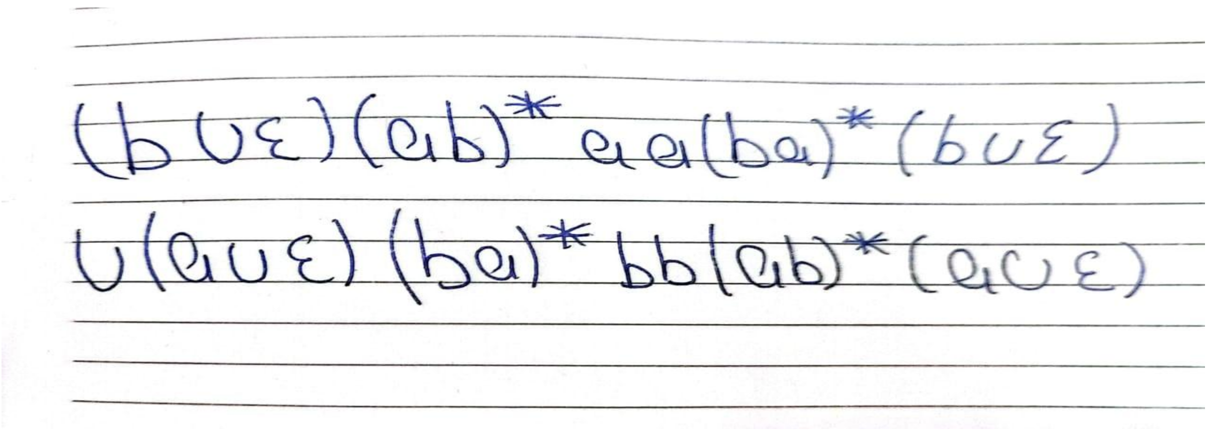
Report

Course: System Programming

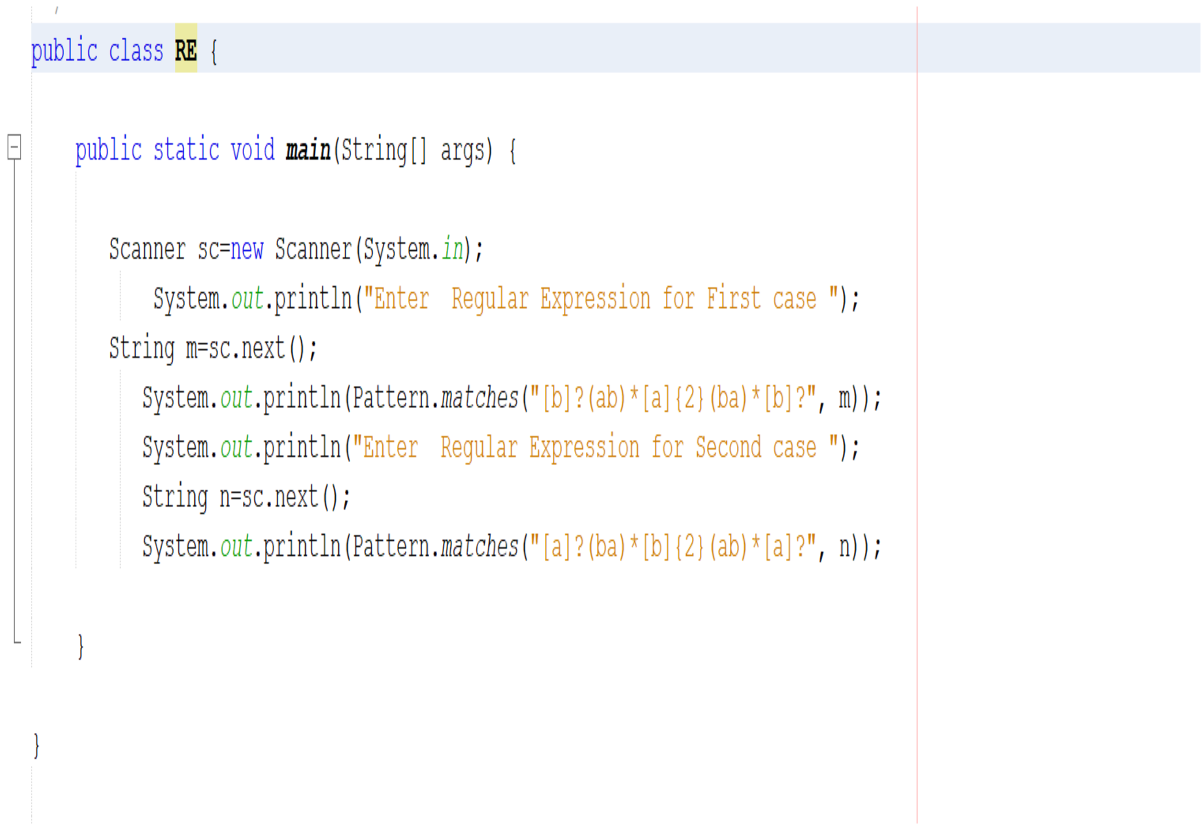
regular expression:



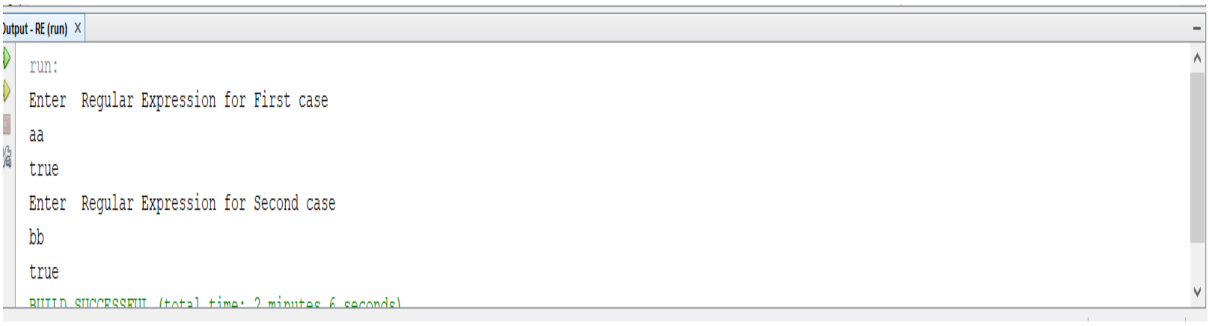
$(b \cup \varepsilon)(ab)^* aa(ba)^*(b \cup \varepsilon)$

$\cup (a \cup \varepsilon)(ba)^* bb(ab)^*(a \cup \varepsilon)$

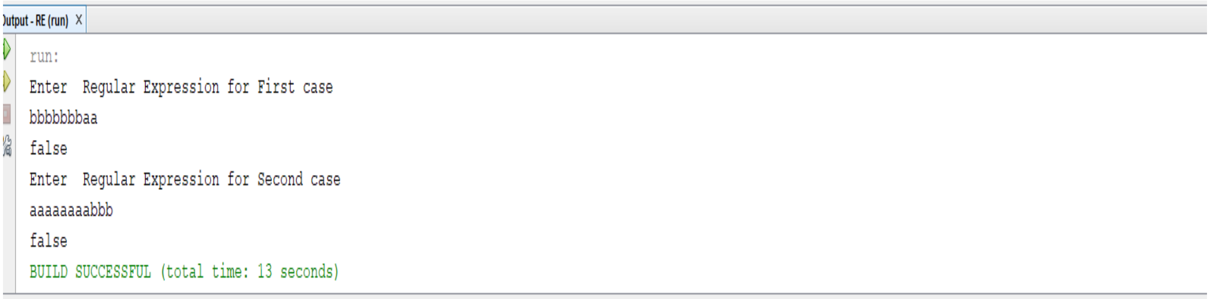
Implementation:



```
public class RE {

    public static void main(String[] args) {

        Scanner sc=new Scanner(System.in);
            System.out.println("Enter  Regular Expression for First case ");
        String m=sc.next();
          System.out.println(Pattern.matches("[b]?(ab)*[a]{2}(ba)*[b]?", m));
          System.out.println("Enter  Regular Expression for Second case ");
          String n=sc.next();
          System.out.println(Pattern.matches("[a]?(ba)*[b]{2}(ab)*[a]?", n));

    }

}
```

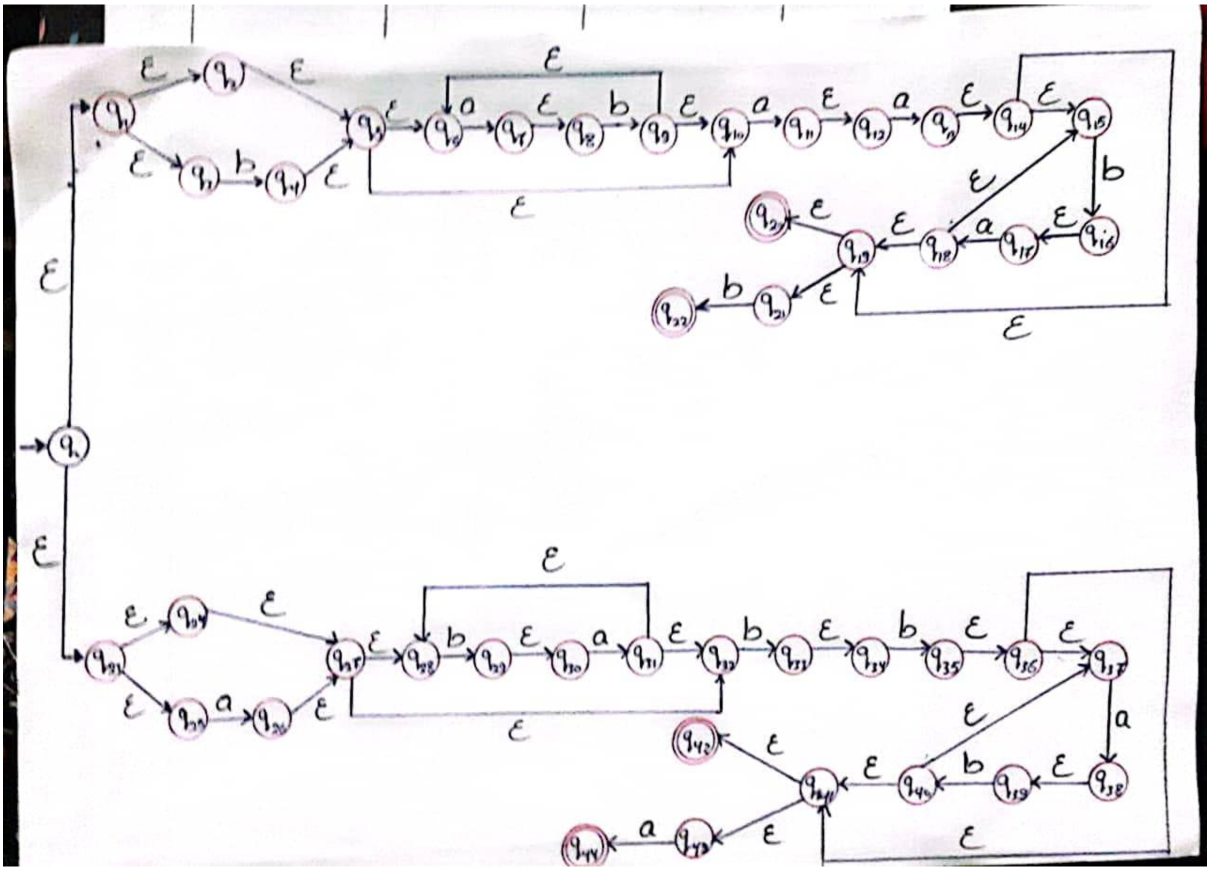


```
run:
Enter  Regular Expression for First case
aa
true
Enter  Regular Expression for Second case
bb
true
BUILD SUCCESSFUL (total time: 2 minutes 6 seconds)
```

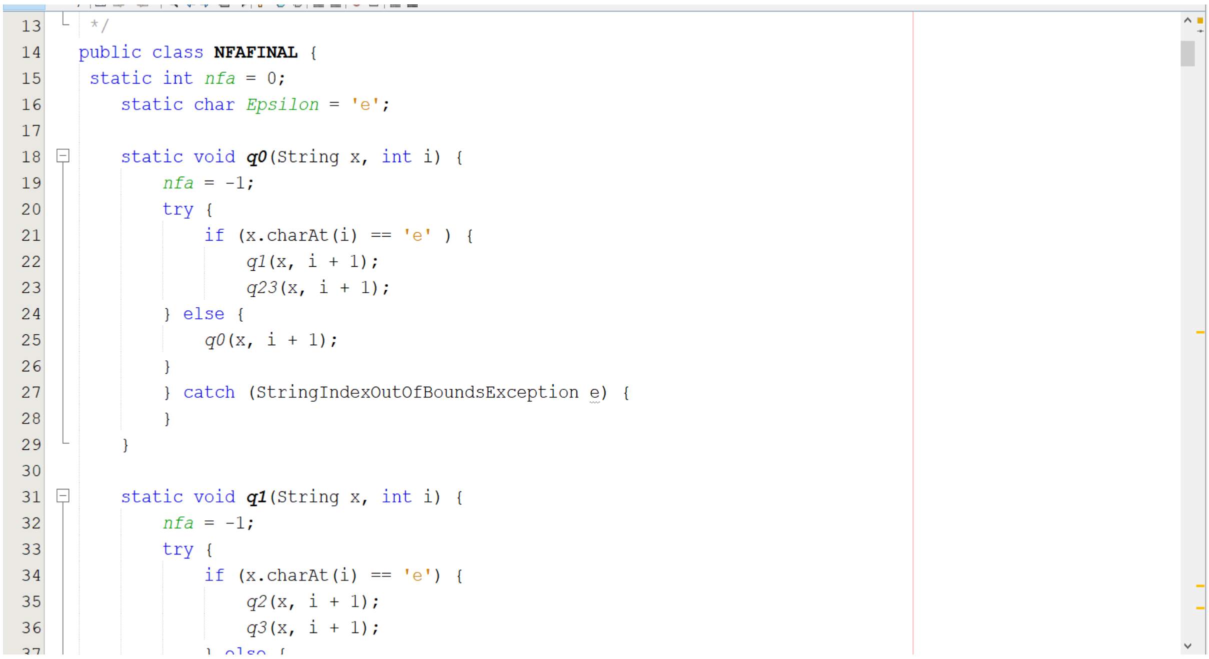


```
run:
Enter  Regular Expression for First case
bbbbbbbaa
false
Enter  Regular Expression for Second case
aaaaaaaabbb
false
BUILD SUCCESSFUL (total time: 13 seconds)
```

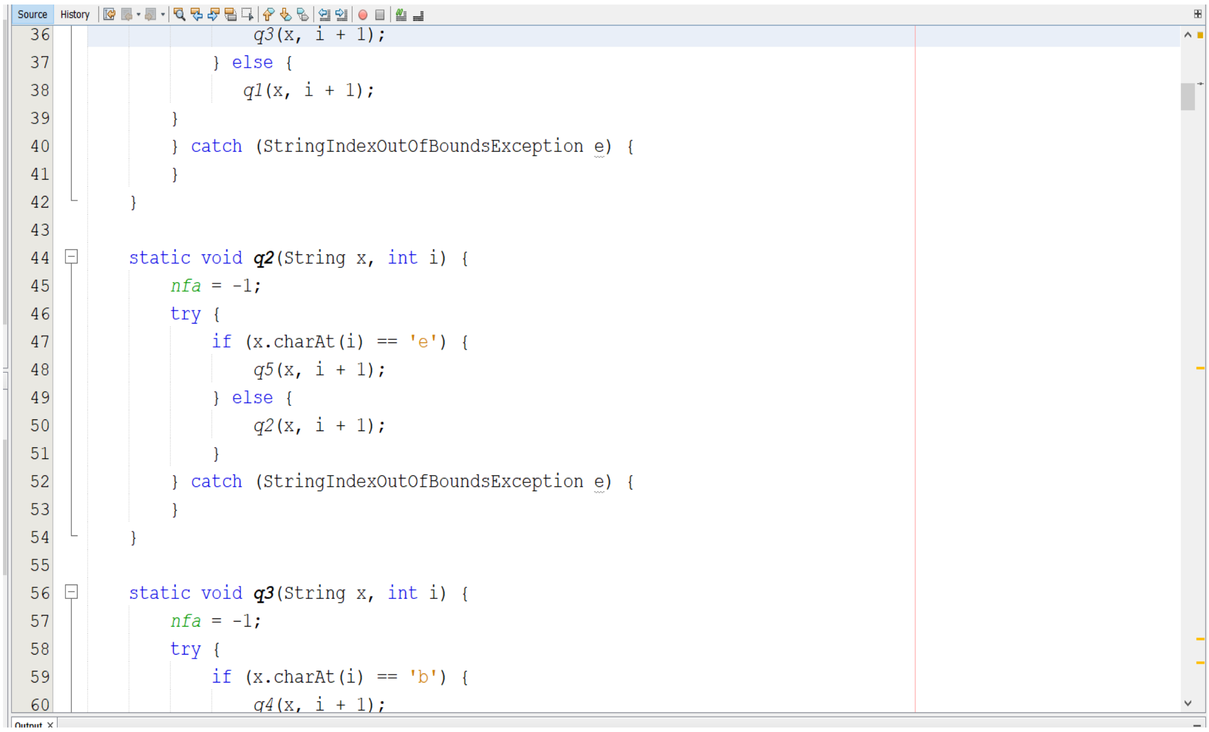
NFA:



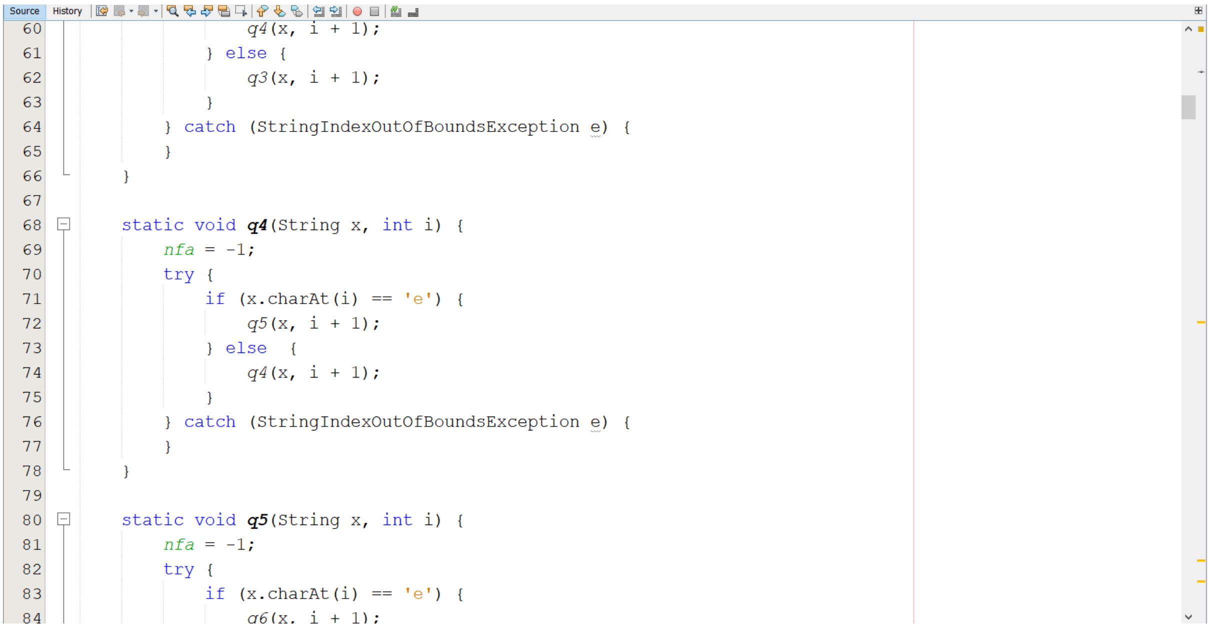
Implementation:



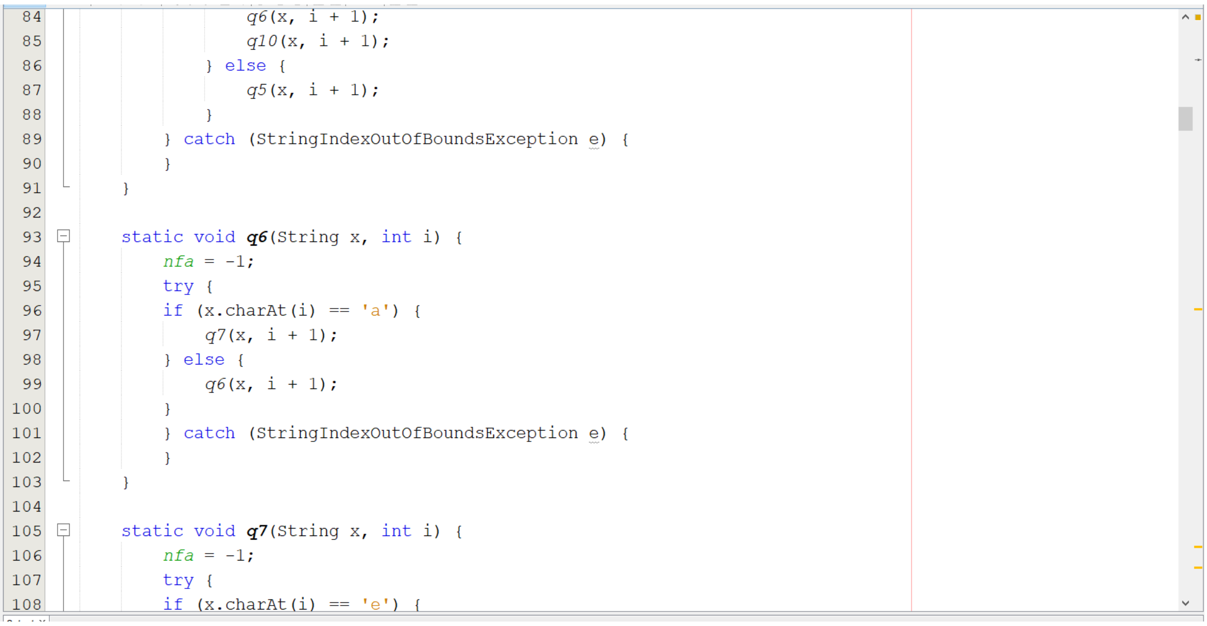
```
 */
public class NFAFINAL {
 static int nfa = 0;
    static char Epsilon = 'e';

    static void q0(String x, int i) {
        nfa = -1;
        try {
            if (x.charAt(i) == 'e' ) {
                q1(x, i + 1);
                q23(x, i + 1);
        } else {
            q0(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q1(String x, int i) {
        nfa = -1;
        try {
            if (x.charAt(i) == 'e') {
                q2(x, i + 1);
                q3(x, i + 1);
            } else {
```



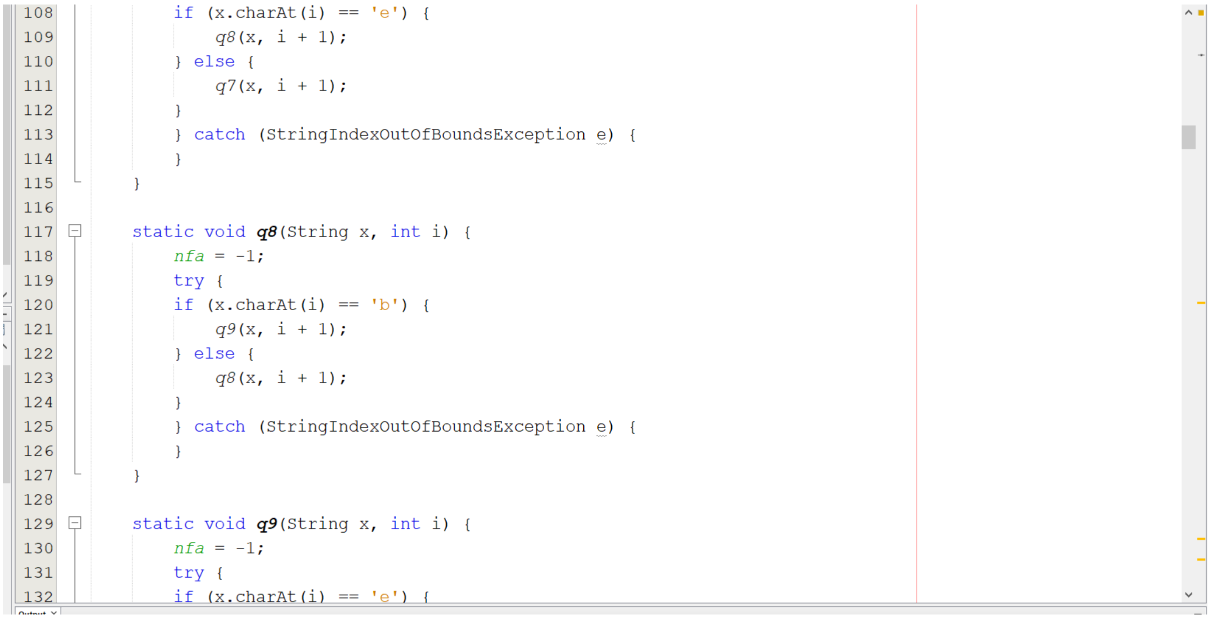
```
                q3(x, i + 1);
            } else {
                q1(x, i + 1);
            }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q2(String x, int i) {
        nfa = -1;
        try {
            if (x.charAt(i) == 'e') {
                q5(x, i + 1);
            } else {
                q2(x, i + 1);
            }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q3(String x, int i) {
        nfa = -1;
        try {
            if (x.charAt(i) == 'b') {
                q4(x, i + 1);
```



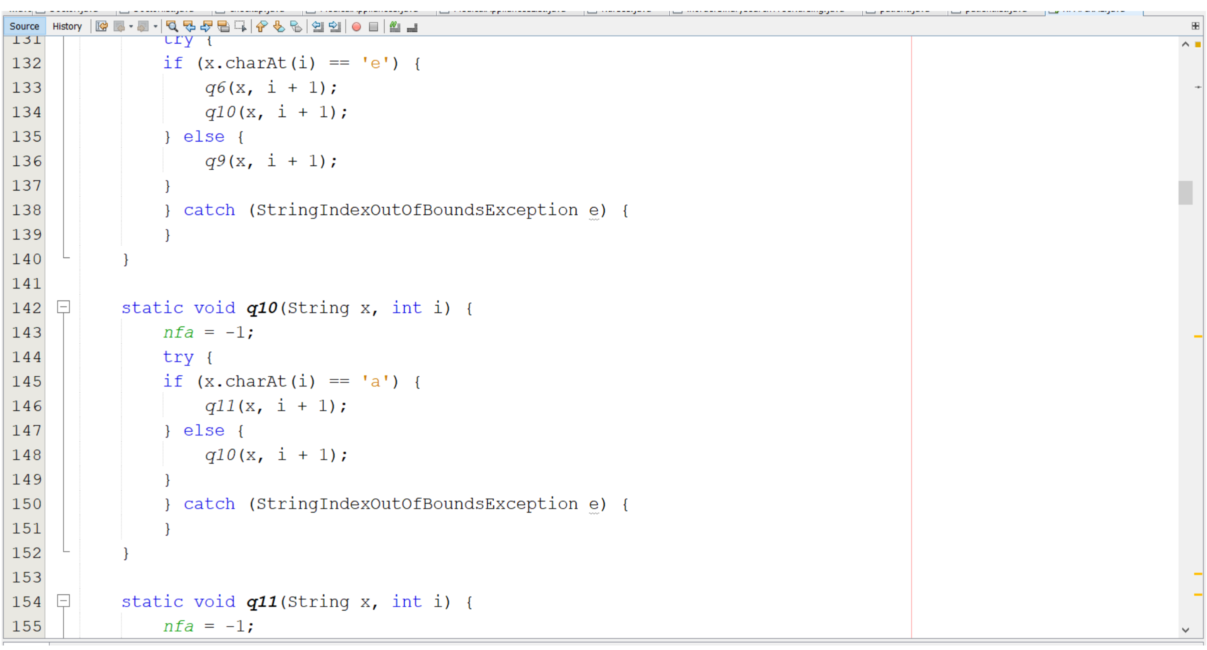
```
                q4(x, i + 1);
            } else {
                q3(x, i + 1);
            }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q4(String x, int i) {
        nfa = -1;
        try {
            if (x.charAt(i) == 'e') {
                q5(x, i + 1);
            } else  {
                q4(x, i + 1);
            }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q5(String x, int i) {
        nfa = -1;
        try {
            if (x.charAt(i) == 'e') {
                q6(x, i + 1);
```



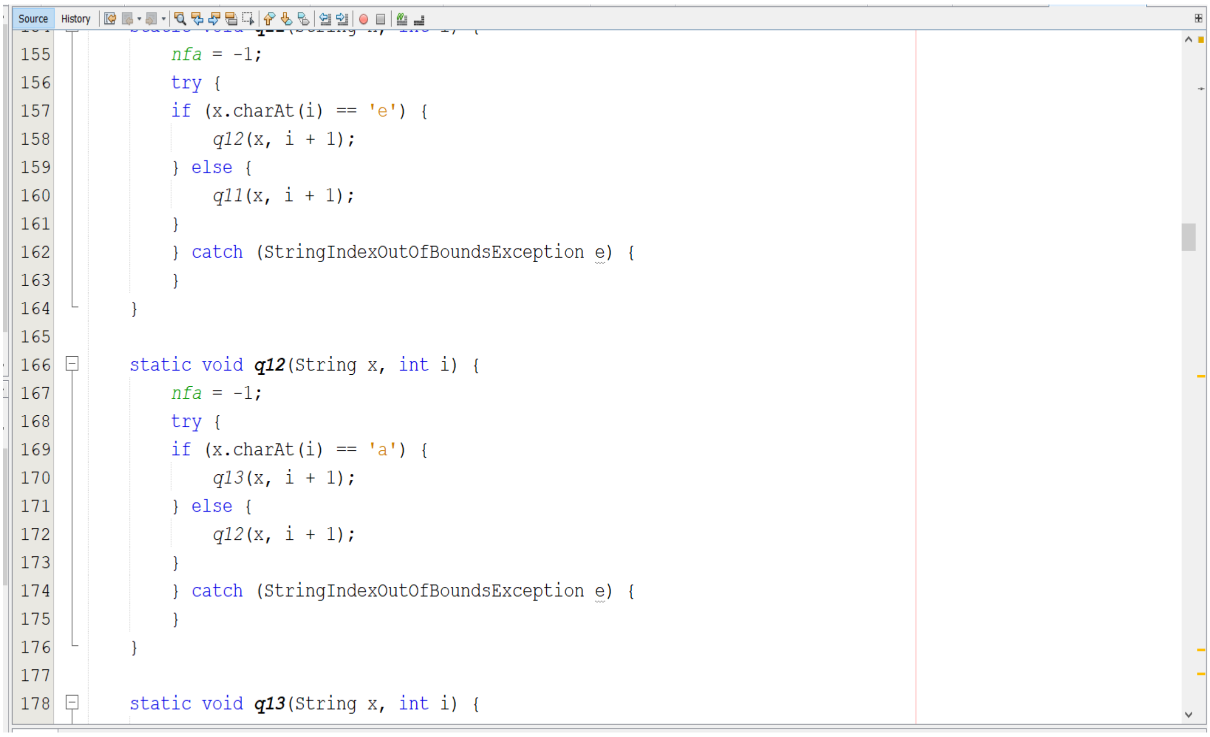
```
                q6(x, i + 1);
                q10(x, i + 1);
            } else {
                q5(x, i + 1);
            }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q6(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'a') {
            q7(x, i + 1);
        } else {
            q6(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q7(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
```



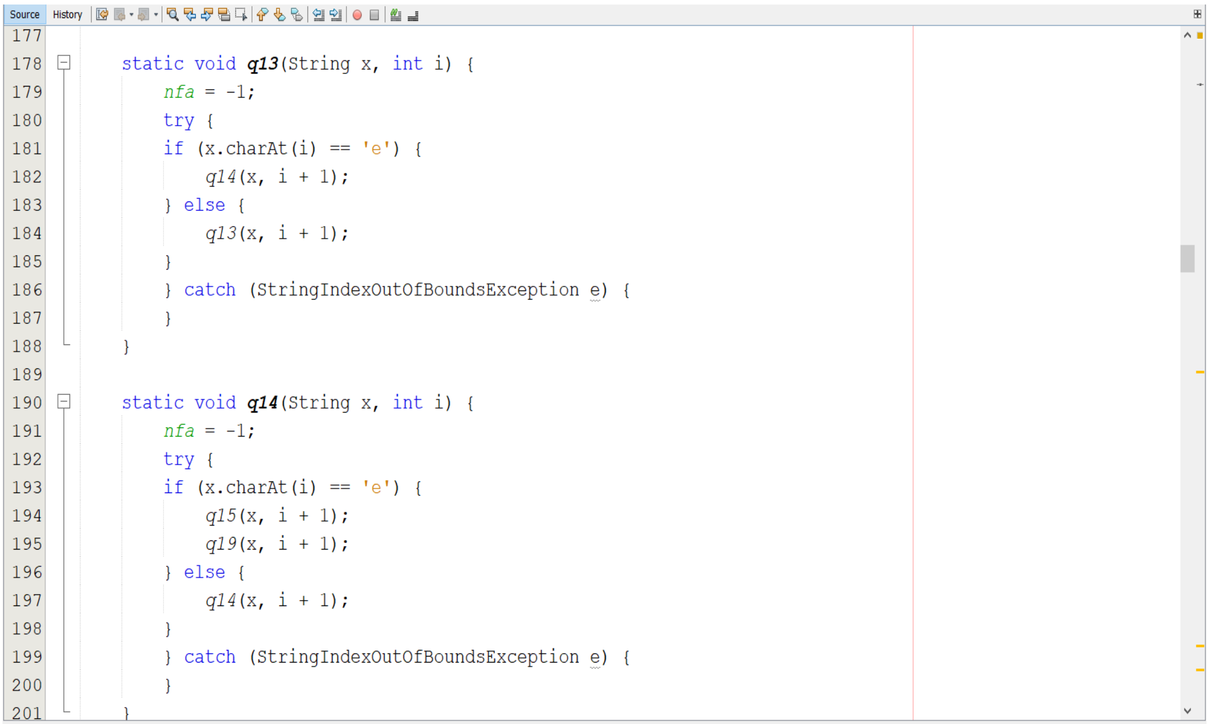
```
        if (x.charAt(i) == 'e') {
            q8(x, i + 1);
        } else {
            q7(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q8(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'b') {
            q9(x, i + 1);
        } else {
            q8(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q9(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
```



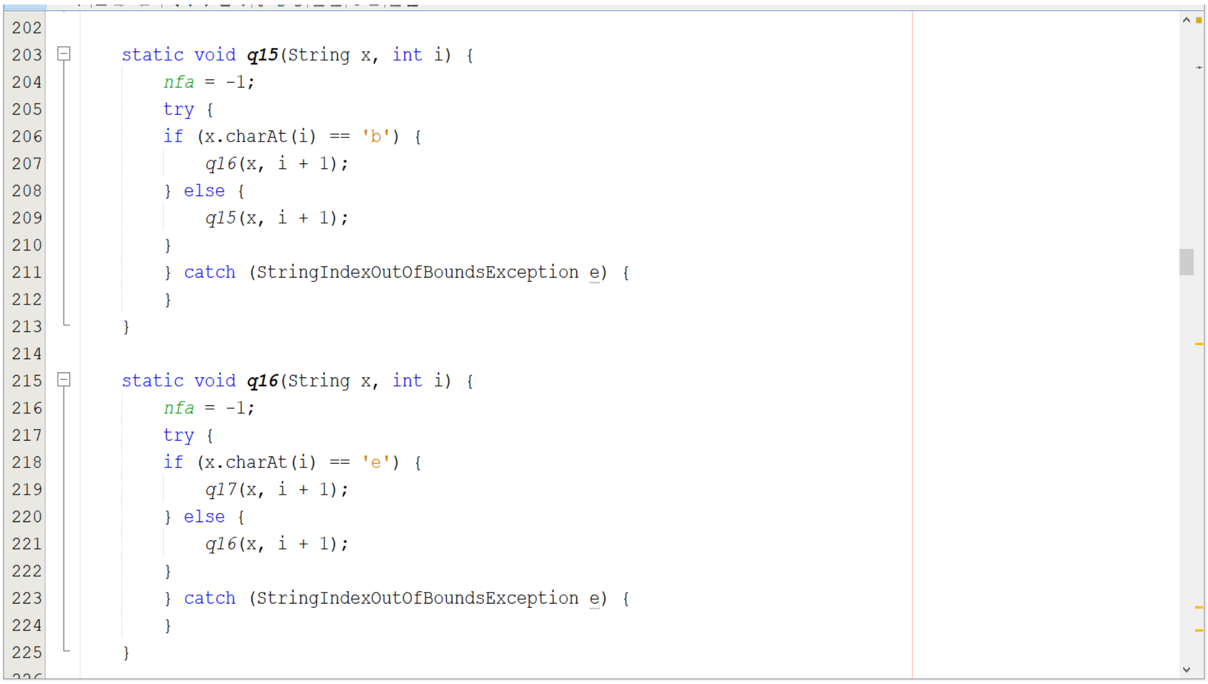
```
        try {
        if (x.charAt(i) == 'e') {
            q6(x, i + 1);
            q10(x, i + 1);
        } else {
            q9(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q10(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'a') {
            q11(x, i + 1);
        } else {
            q10(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q11(String x, int i) {
        nfa = -1;
```



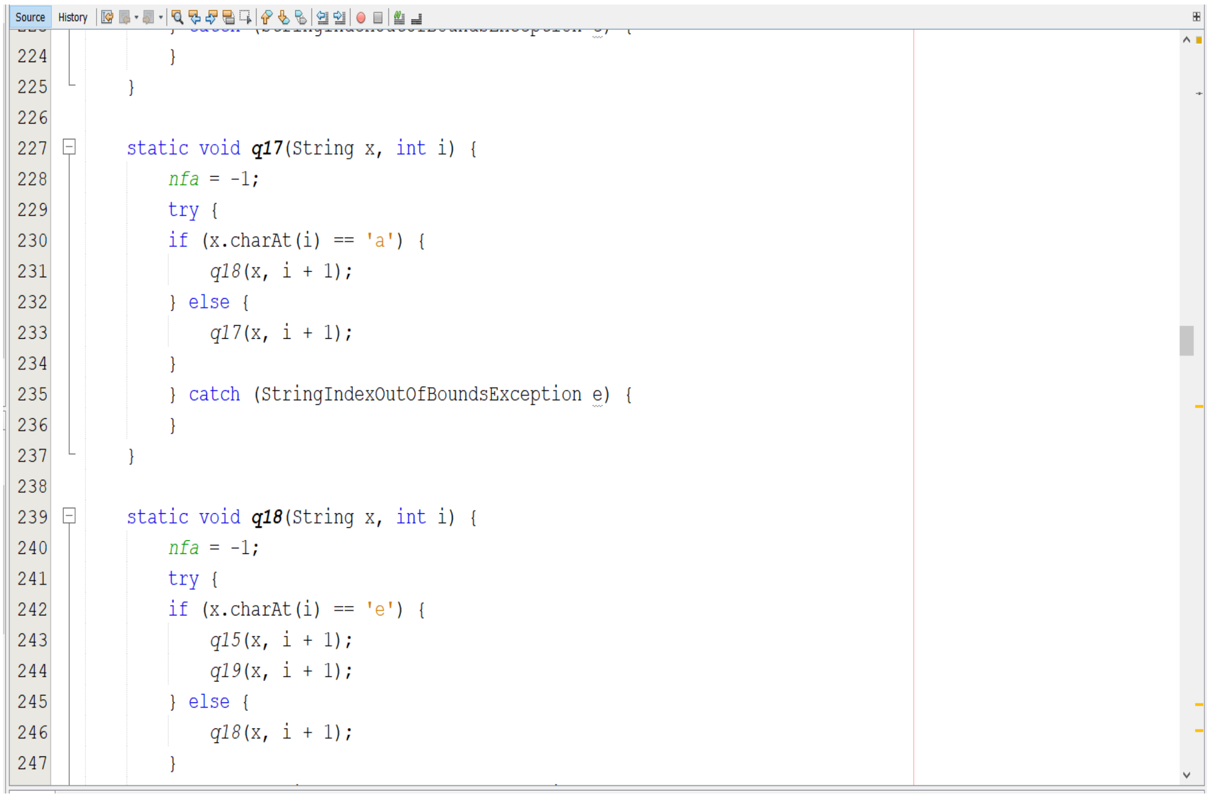
```
    static void q11(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
            q12(x, i + 1);
        } else {
            q11(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q12(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'a') {
            q13(x, i + 1);
        } else {
            q12(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q13(String x, int i) {
```



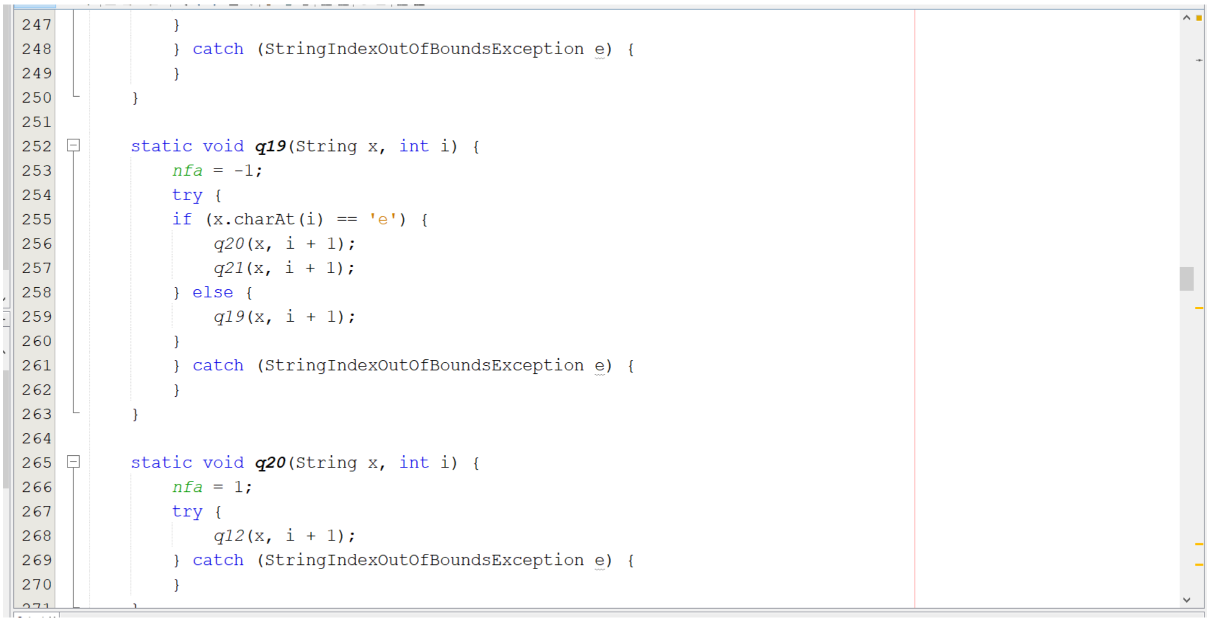
```

    static void q13(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
            q14(x, i + 1);
        } else {
            q13(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q14(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
            q15(x, i + 1);
            q19(x, i + 1);
        } else {
            q14(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }
```



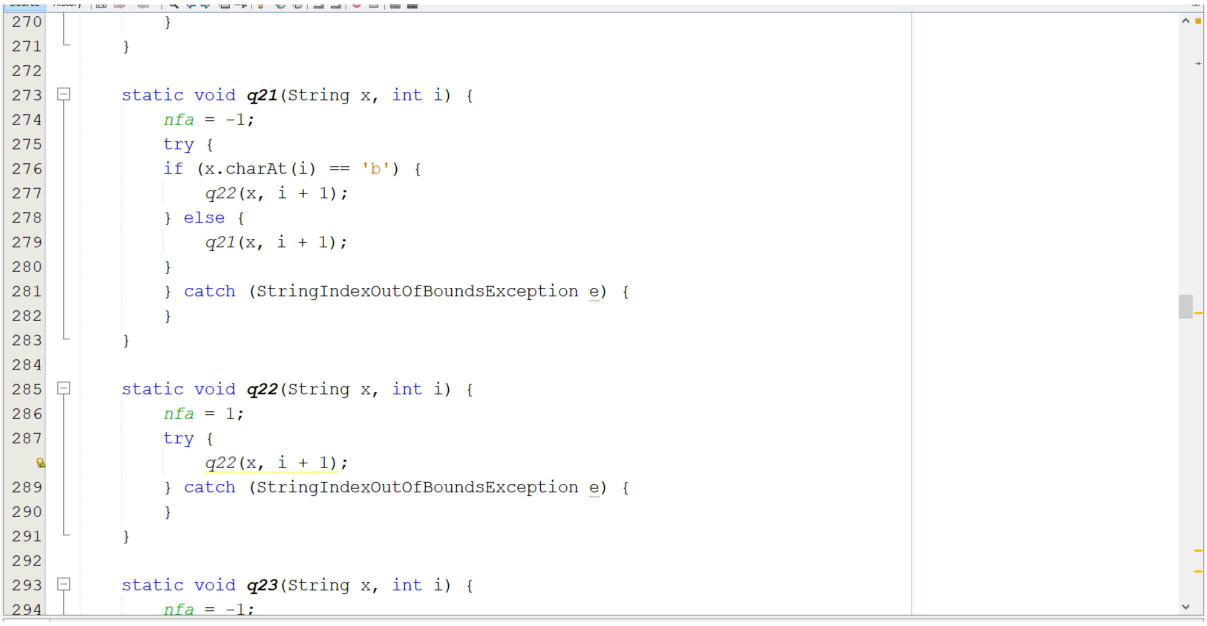
```

    static void q15(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'b') {
            q16(x, i + 1);
        } else {
            q15(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q16(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
            q17(x, i + 1);
        } else {
            q16(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }
```



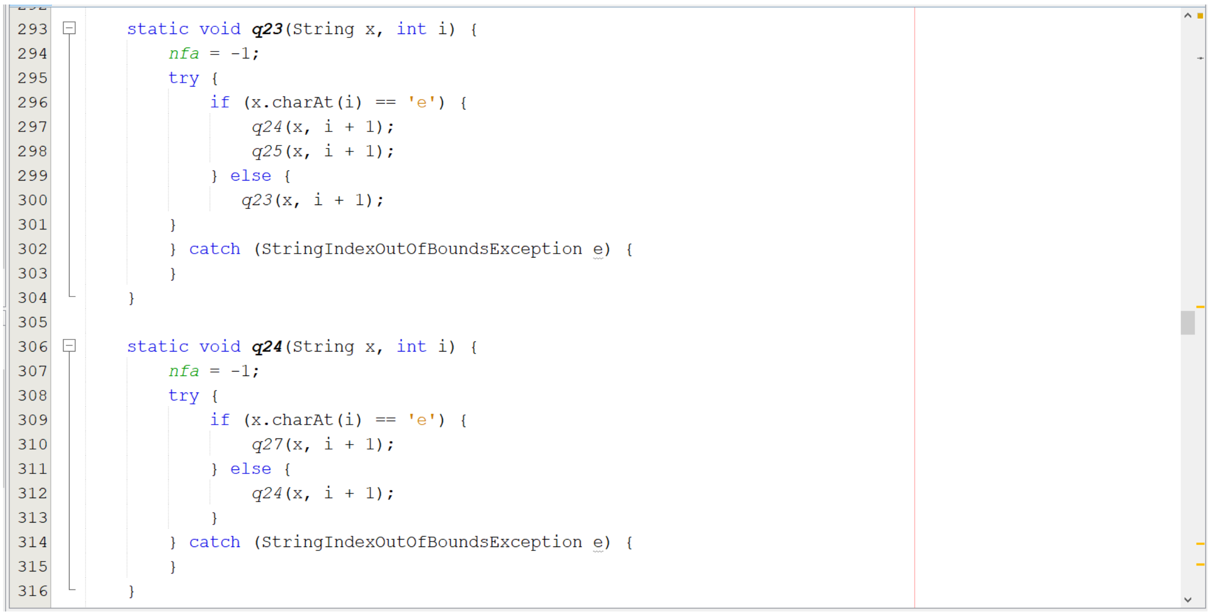
```
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q17(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'a') {
            q18(x, i + 1);
        } else {
            q17(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q18(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
            q15(x, i + 1);
            q19(x, i + 1);
        } else {
            q18(x, i + 1);
        }
```



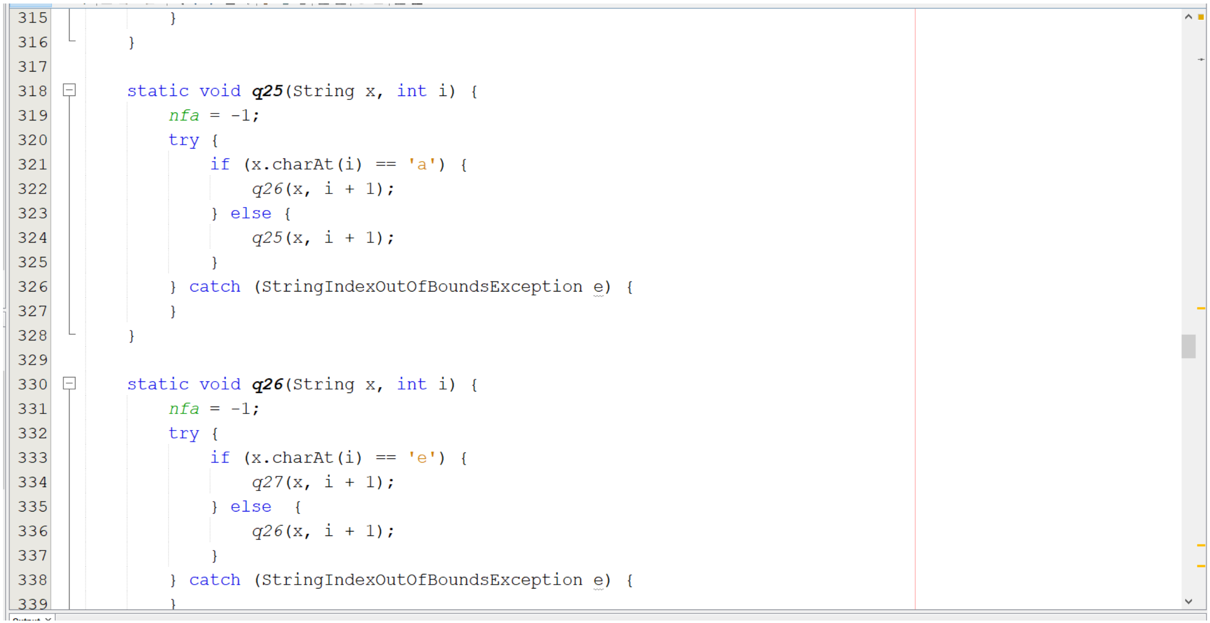
```
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q19(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
            q20(x, i + 1);
            q21(x, i + 1);
        } else {
            q19(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q20(String x, int i) {
        nfa = 1;
        try {
            q12(x, i + 1);
        } catch (StringIndexOutOfBoundsException e) {
        }
    }
```



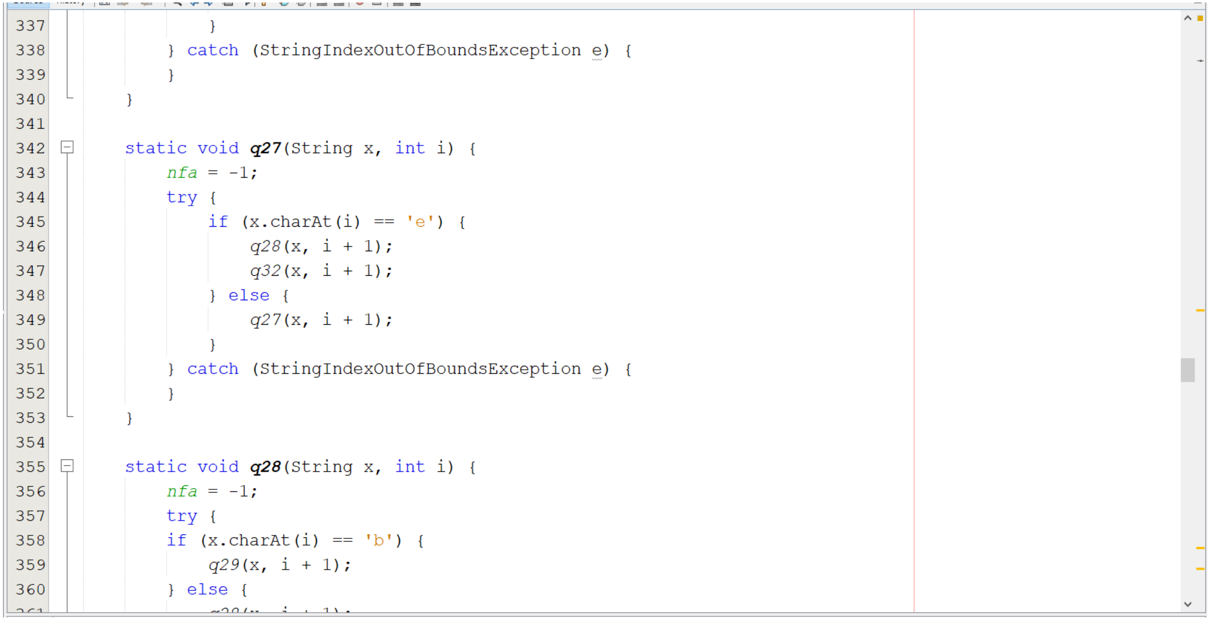
```
        }
    }

    static void q21(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'b') {
            q22(x, i + 1);
        } else {
            q21(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q22(String x, int i) {
        nfa = 1;
        try {
            q22(x, i + 1);
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q23(String x, int i) {
        nfa = -1;
```



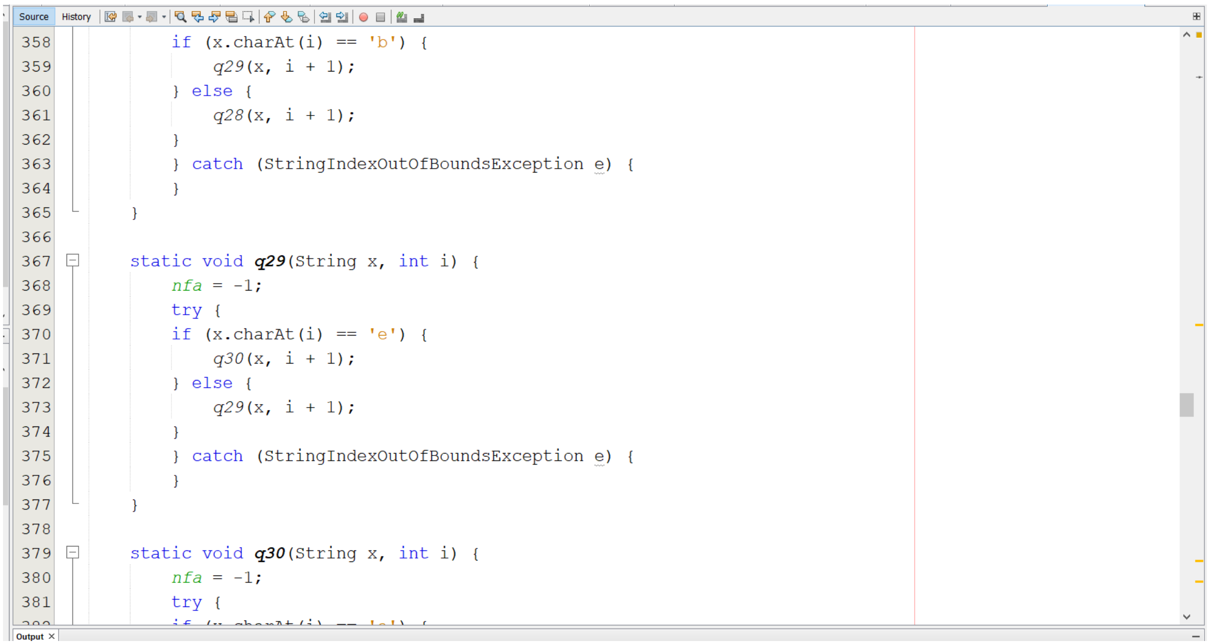
```java
    static void q23(String x, int i) {
        nfa = -1;
        try {
            if (x.charAt(i) == 'e') {
                q24(x, i + 1);
                q25(x, i + 1);
            } else {
               q23(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q24(String x, int i) {
        nfa = -1;
        try {
            if (x.charAt(i) == 'e') {
                q27(x, i + 1);
            } else {
                q24(x, i + 1);
            }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }
```



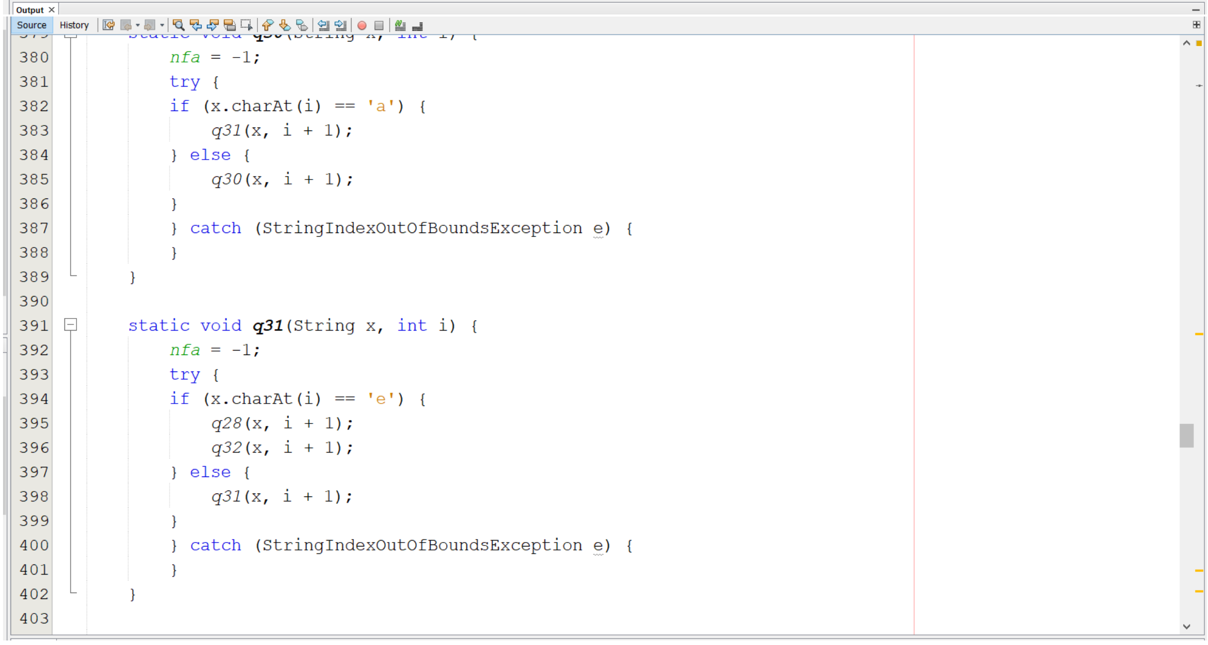
```java
        }
    }

    static void q25(String x, int i) {
        nfa = -1;
        try {
            if (x.charAt(i) == 'a') {
                q26(x, i + 1);
            } else {
                q25(x, i + 1);
            }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q26(String x, int i) {
        nfa = -1;
        try {
            if (x.charAt(i) == 'e') {
                q27(x, i + 1);
            } else  {
                q26(x, i + 1);
            }
        } catch (StringIndexOutOfBoundsException e) {
        }
```



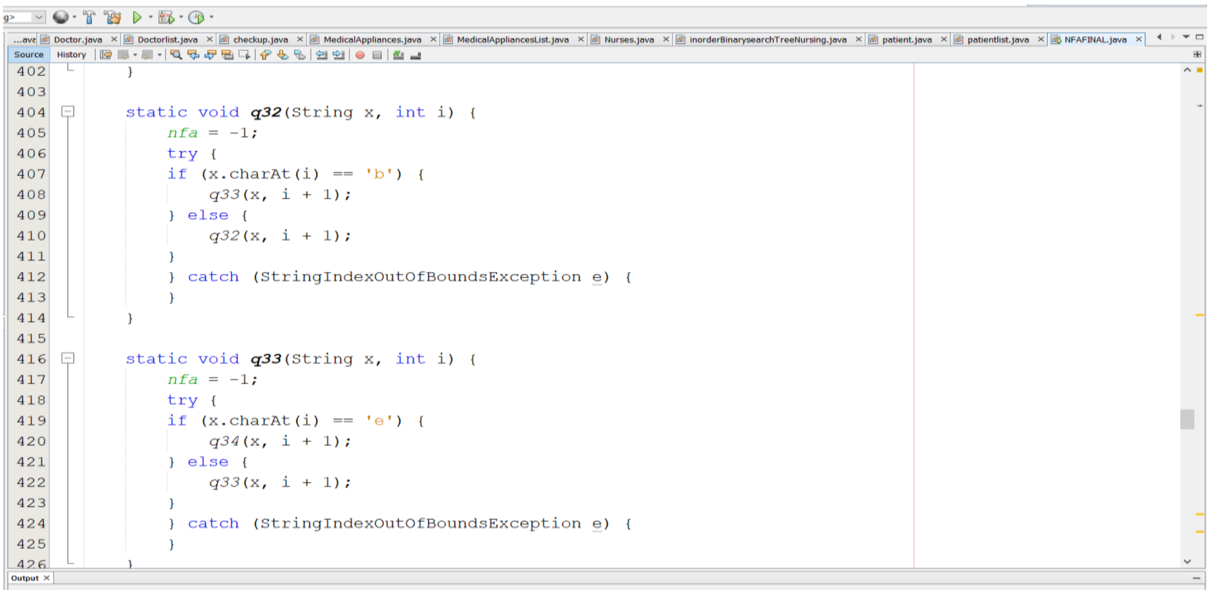
```java
            }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q27(String x, int i) {
        nfa = -1;
        try {
            if (x.charAt(i) == 'e') {
                q28(x, i + 1);
                q32(x, i + 1);
            } else {
                q27(x, i + 1);
            }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q28(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'b') {
            q29(x, i + 1);
        } else {
            q28(x, i + 1);
```



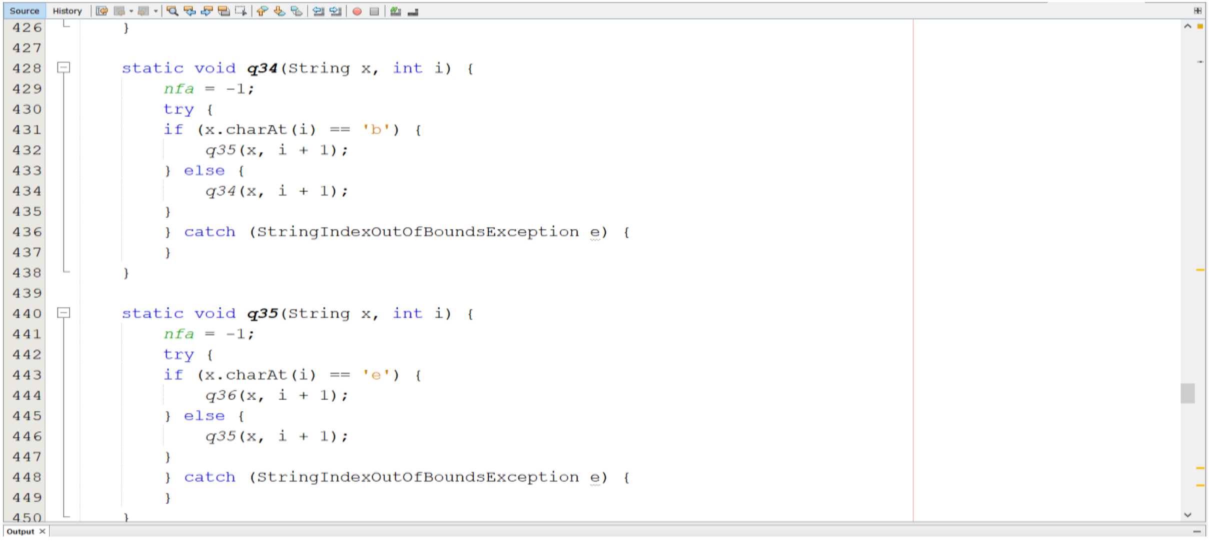
```
        if (x.charAt(i) == 'b') {
            q29(x, i + 1);
        } else {
            q28(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q29(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
            q30(x, i + 1);
        } else {
            q29(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q30(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'a') {
```



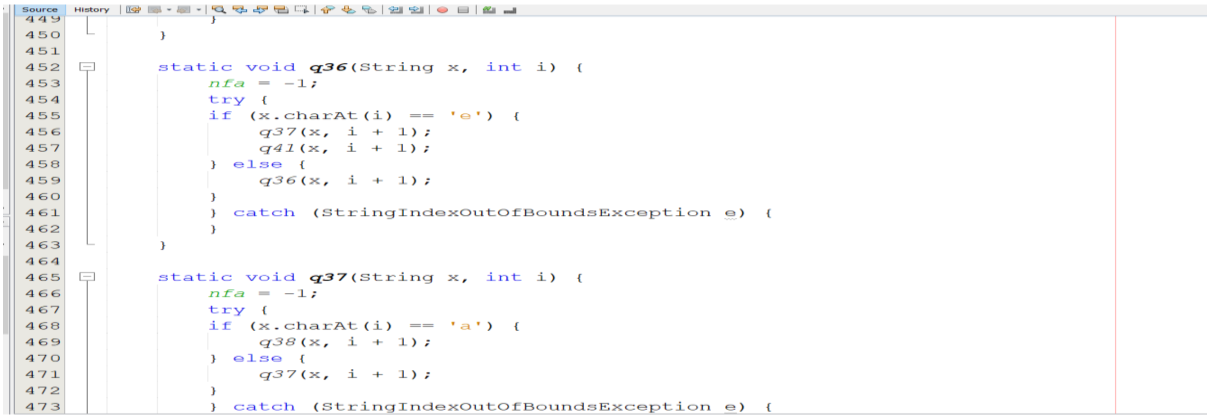
```
    static void q30(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'a') {
            q31(x, i + 1);
        } else {
            q30(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q31(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
            q28(x, i + 1);
            q32(x, i + 1);
        } else {
            q31(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }
```



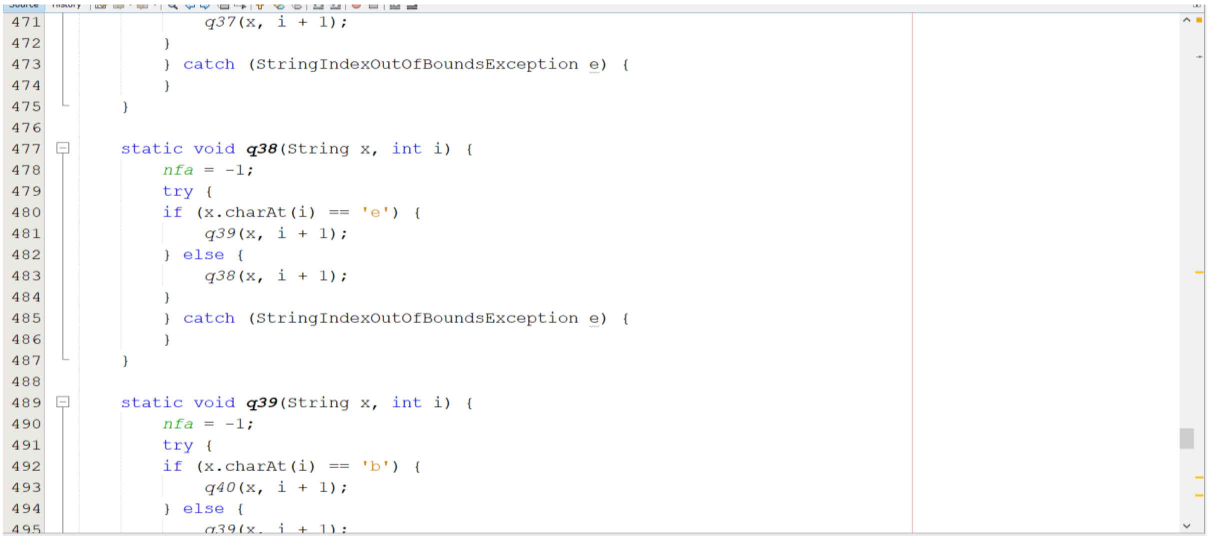
```
    }

    static void q32(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'b') {
            q33(x, i + 1);
        } else {
            q32(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q33(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
            q34(x, i + 1);
        } else {
            q33(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }
```



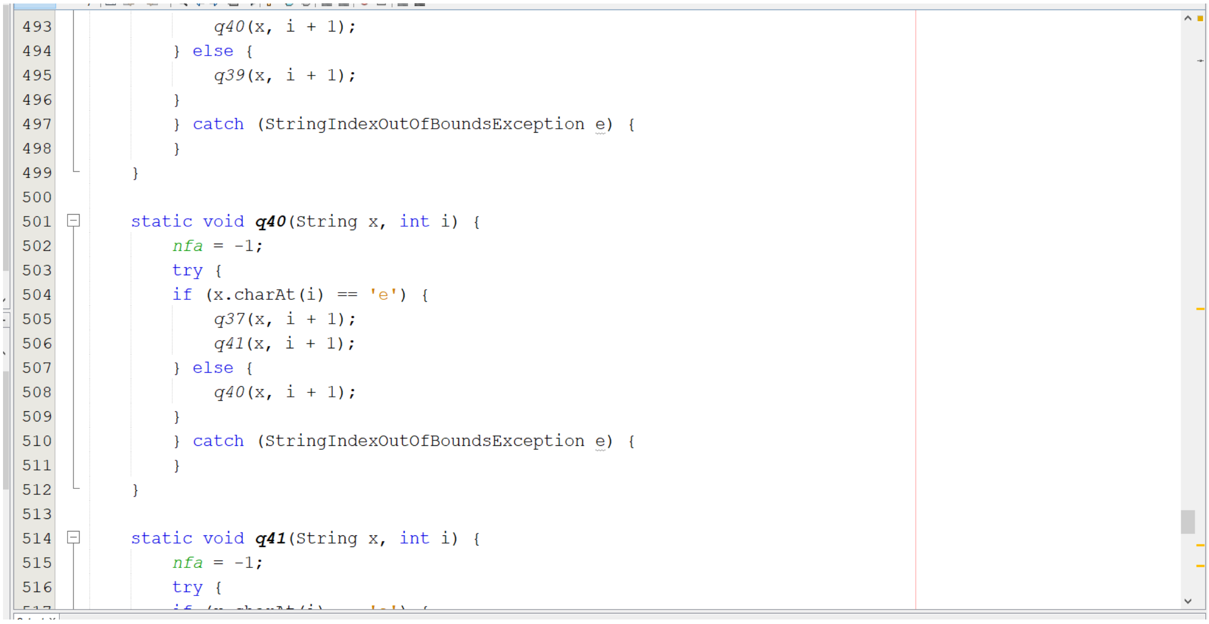
```
    }

    static void q34(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'b') {
            q35(x, i + 1);
        } else {
            q34(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q35(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
            q36(x, i + 1);
        } else {
            q35(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }
```



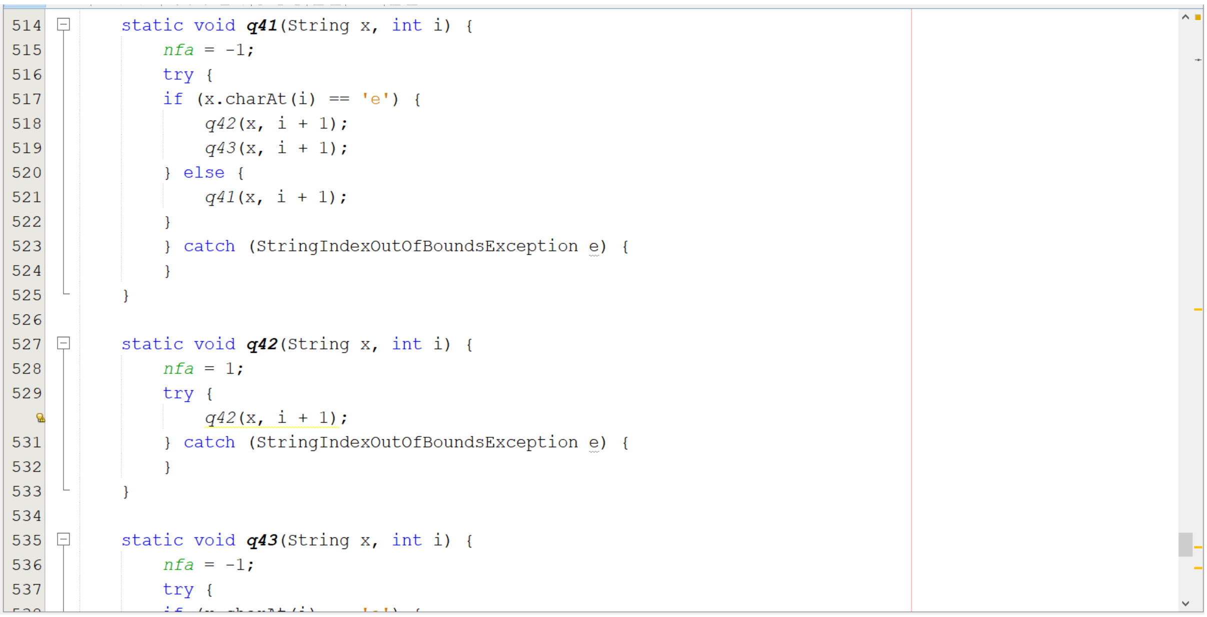
```
        }
    }

    static void q36(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
            q37(x, i + 1);
            q41(x, i + 1);
        } else {
            q36(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q37(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'a') {
            q38(x, i + 1);
        } else {
            q37(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
```



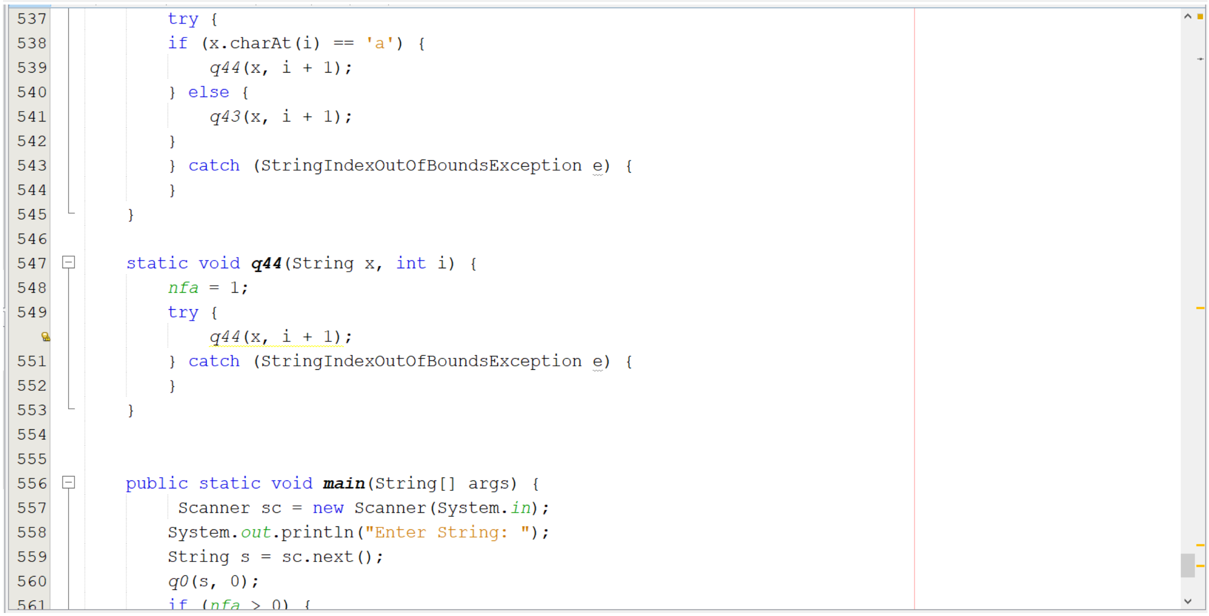
```
            q37(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q38(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
            q39(x, i + 1);
        } else {
            q38(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q39(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'b') {
            q40(x, i + 1);
        } else {
            q39(x, i + 1);
```



```
            q40(x, i + 1);
        } else {
            q39(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q40(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
            q37(x, i + 1);
            q41(x, i + 1);
        } else {
            q40(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q41(String x, int i) {
        nfa = -1;
        try {
```

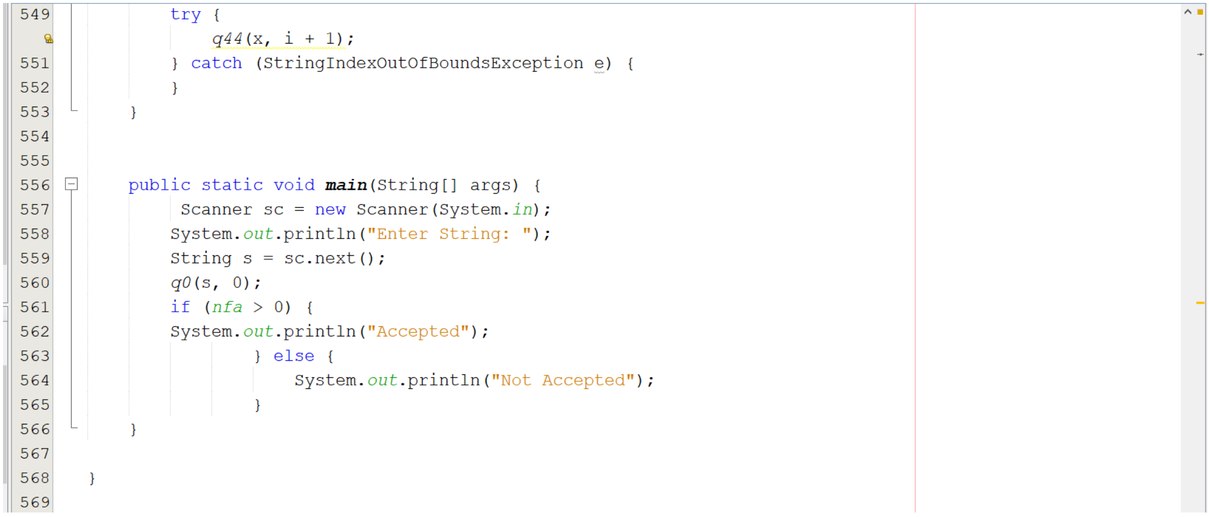


```
    static void q41(String x, int i) {
        nfa = -1;
        try {
        if (x.charAt(i) == 'e') {
            q42(x, i + 1);
            q43(x, i + 1);
        } else {
            q41(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q42(String x, int i) {
        nfa = 1;
        try {
            q42(x, i + 1);
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q43(String x, int i) {
        nfa = -1;
        try {
```



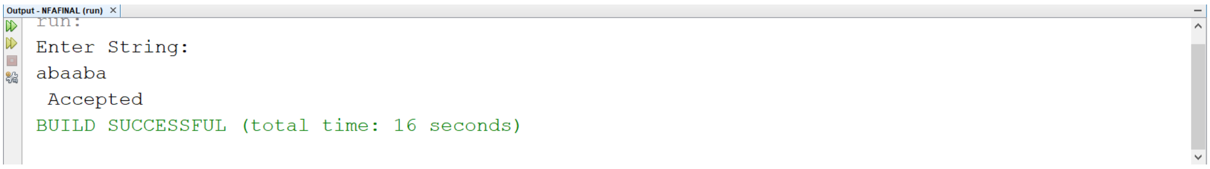
```
        try {
```

```
        if (x.charAt(i) == 'a') {
            q44(x, i + 1);
        } else {
            q43(x, i + 1);
        }
        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q44(String x, int i) {
        nfa = 1;
        try {
            q44(x, i + 1);
        } catch (StringIndexOutOfBoundsException e) {
        }
    }


    public static void main(String[] args) {
         Scanner sc = new Scanner(System.in);
        System.out.println("Enter String: ");
        String s = sc.next();
        q0(s, 0);
        if (nfa > 0) {
```

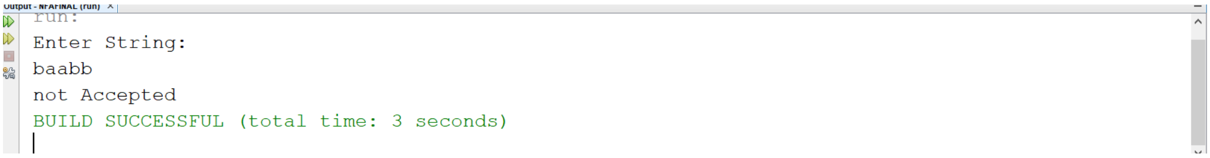


```
        try {
            q44(x, i + 1);
        } catch (StringIndexOutOfBoundsException e) {
        }
    }


    public static void main(String[] args) {
         Scanner sc = new Scanner(System.in);
        System.out.println("Enter String: ");
        String s = sc.next();
        q0(s, 0);
```

```
        if (nfa > 0) {
        System.out.println("Accepted");
                } else {
                    System.out.println("Not Accepted");
                }
    }

}
```

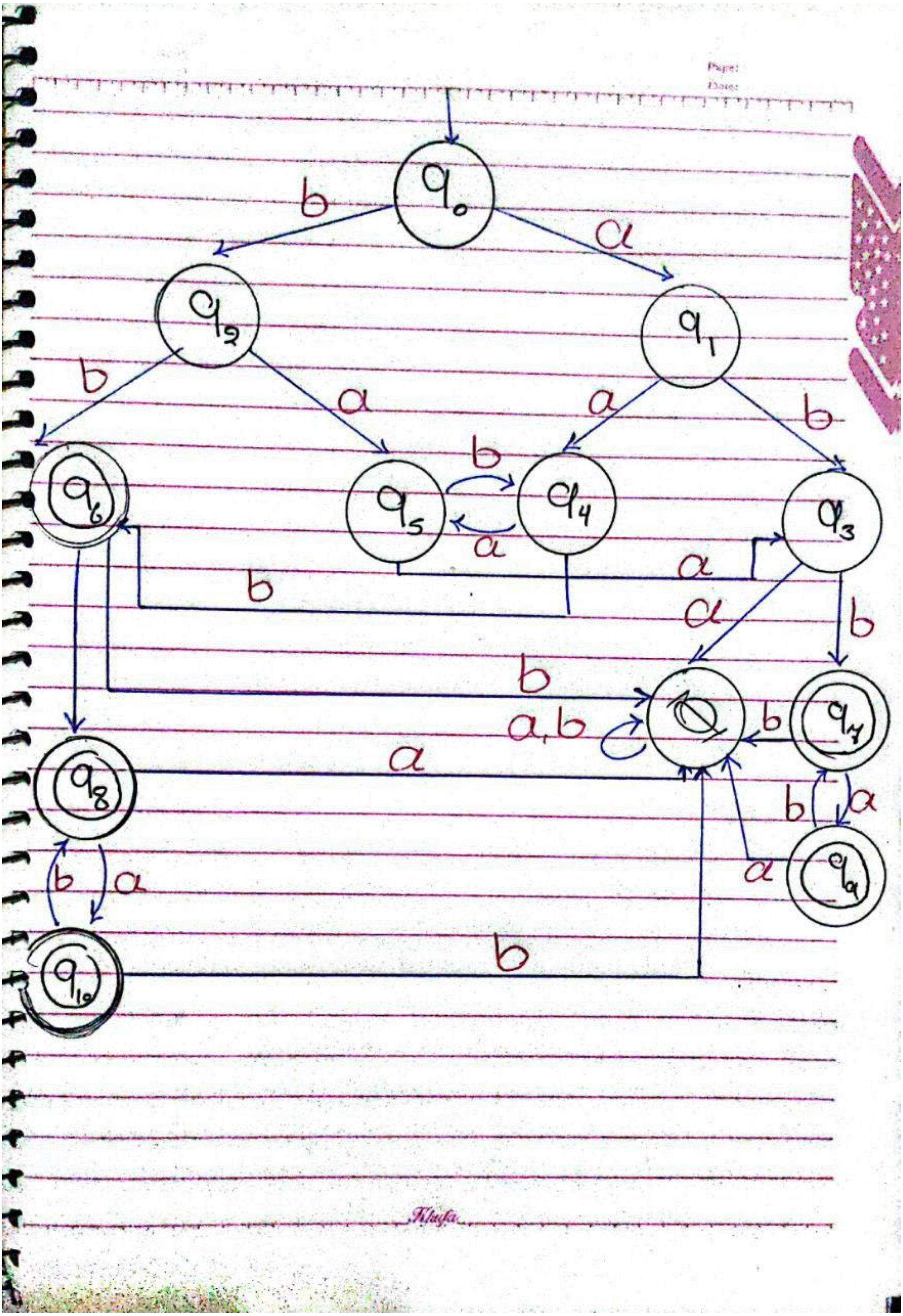


```
run:
Enter String:
abaaba
 Accepted
BUILD SUCCESSFUL (total time: 16 seconds)
```



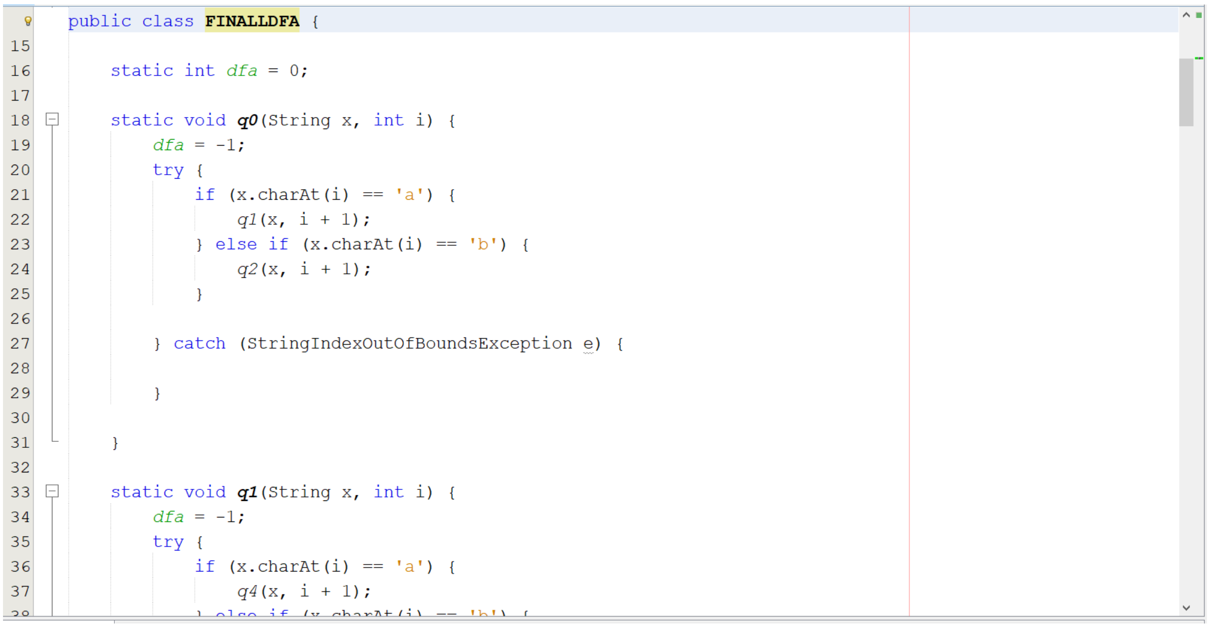
```
run:
Enter String:
baabb
not Accepted
BUILD SUCCESSFUL (total time: 3 seconds)
```

DFA

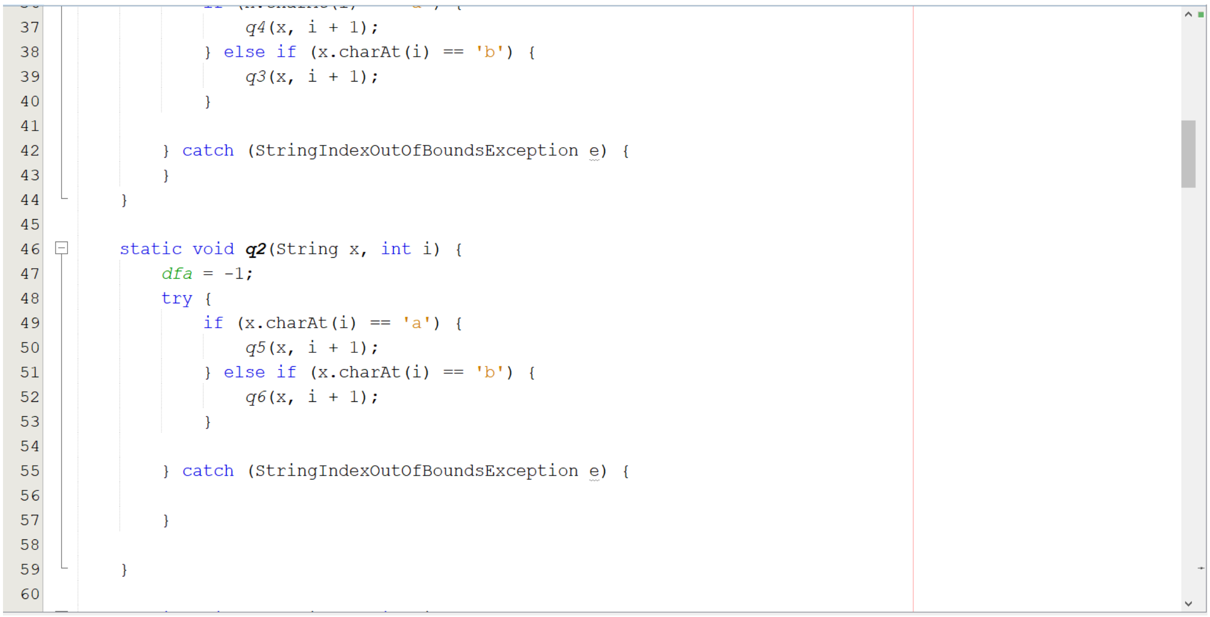


Paper:
Date:
q0
b
a
q2
q1
b
a
a
b
q6
q5
q4
q3
b
a
a
b
a
b
b
Φ
a,b
b
q7
a
a
b
a
q8
b
a
q9
q10
b
Klufa

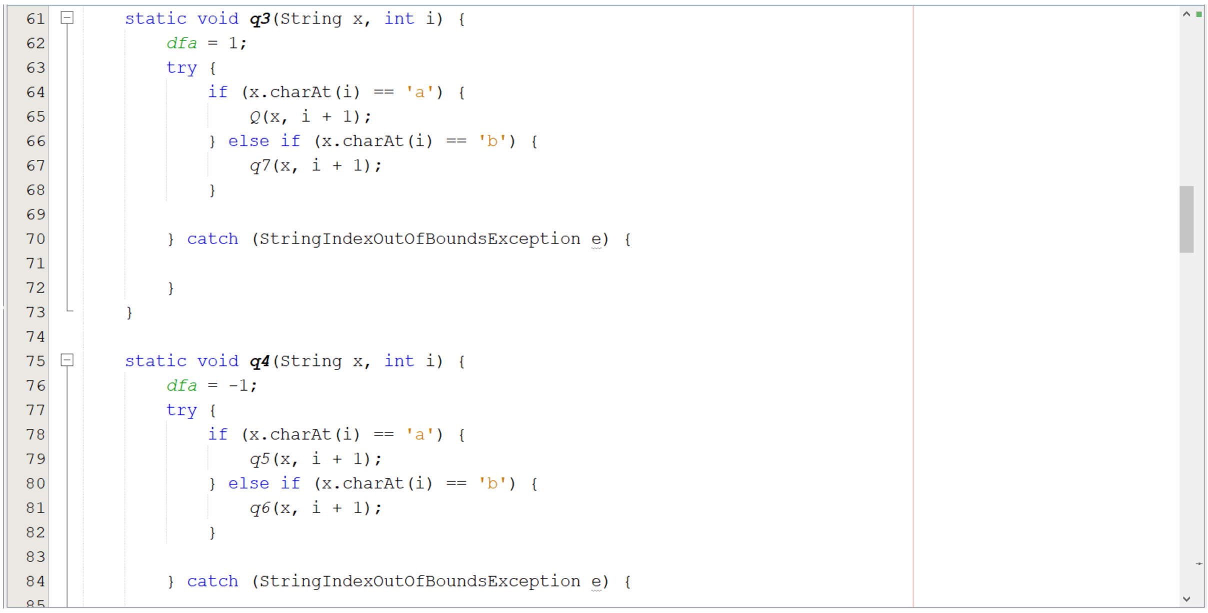
Implementation:



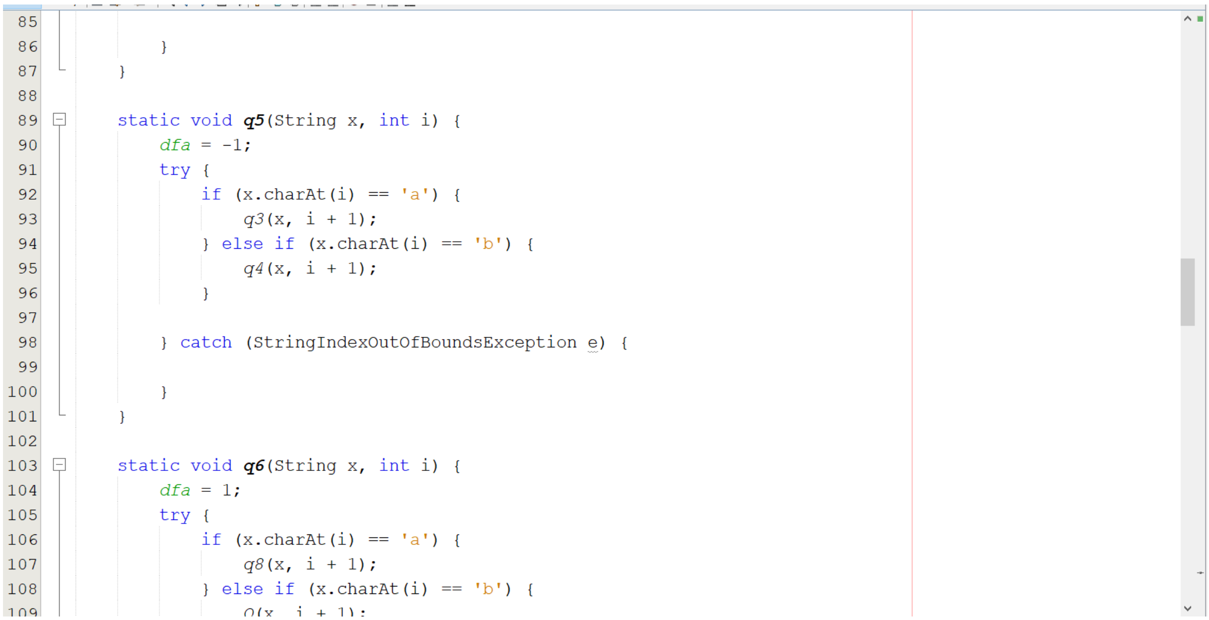
```
public class FINALLDFA {

    static int dfa = 0;

    static void q0(String x, int i) {
        dfa = -1;
        try {
            if (x.charAt(i) == 'a') {
                q1(x, i + 1);
            } else if (x.charAt(i) == 'b') {
                q2(x, i + 1);
            }

        } catch (StringIndexOutOfBoundsException e) {

        }

    }

    static void q1(String x, int i) {
        dfa = -1;
        try {
            if (x.charAt(i) == 'a') {
                q4(x, i + 1);
            } else if (x.charAt(i) == 'b') {
```



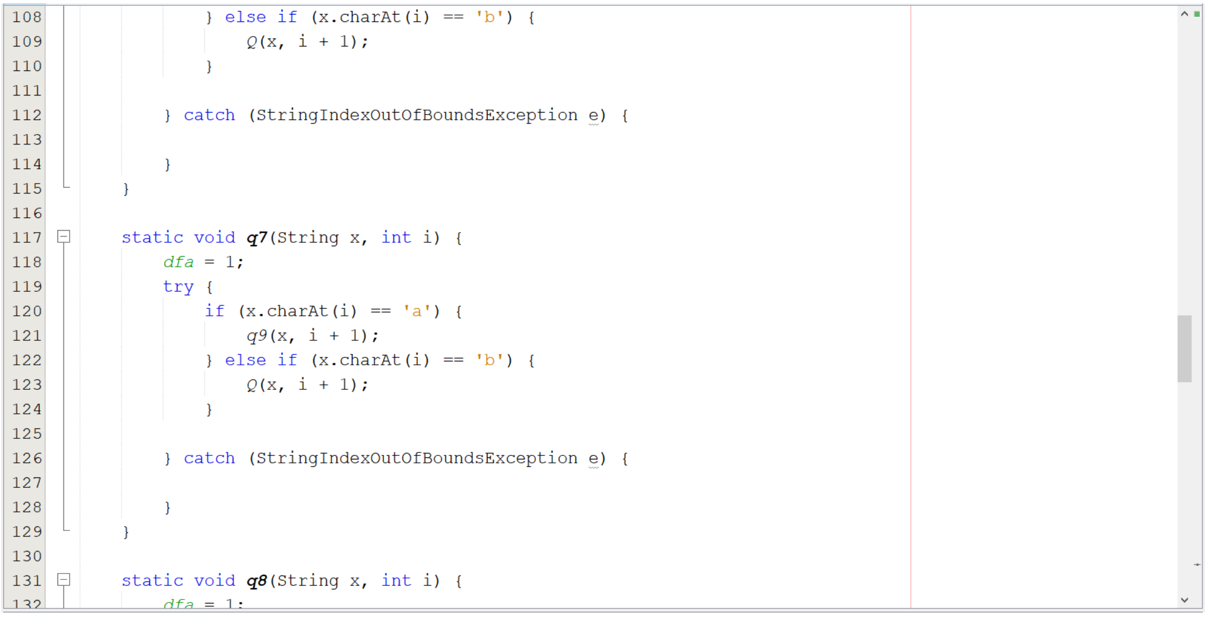
```
                q4(x, i + 1);
            } else if (x.charAt(i) == 'b') {
                q3(x, i + 1);
            }

        } catch (StringIndexOutOfBoundsException e) {
        }
    }

    static void q2(String x, int i) {
        dfa = -1;
        try {
            if (x.charAt(i) == 'a') {
                q5(x, i + 1);
            } else if (x.charAt(i) == 'b') {
                q6(x, i + 1);
            }

        } catch (StringIndexOutOfBoundsException e) {

        }

    }

```



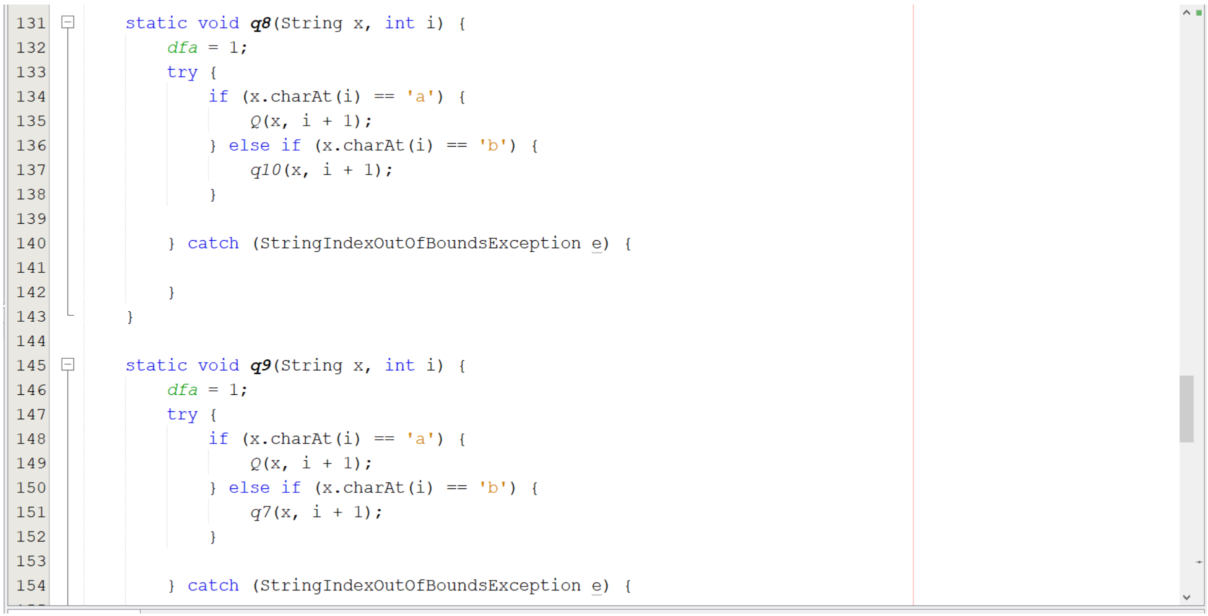
```
    static void q3(String x, int i) {
        dfa = 1;
        try {
            if (x.charAt(i) == 'a') {
                Q(x, i + 1);
            } else if (x.charAt(i) == 'b') {
                q7(x, i + 1);
            }

        } catch (StringIndexOutOfBoundsException e) {

        }
    }

    static void q4(String x, int i) {
        dfa = -1;
        try {
            if (x.charAt(i) == 'a') {
                q5(x, i + 1);
            } else if (x.charAt(i) == 'b') {
                q6(x, i + 1);
            }

        } catch (StringIndexOutOfBoundsException e) {
```



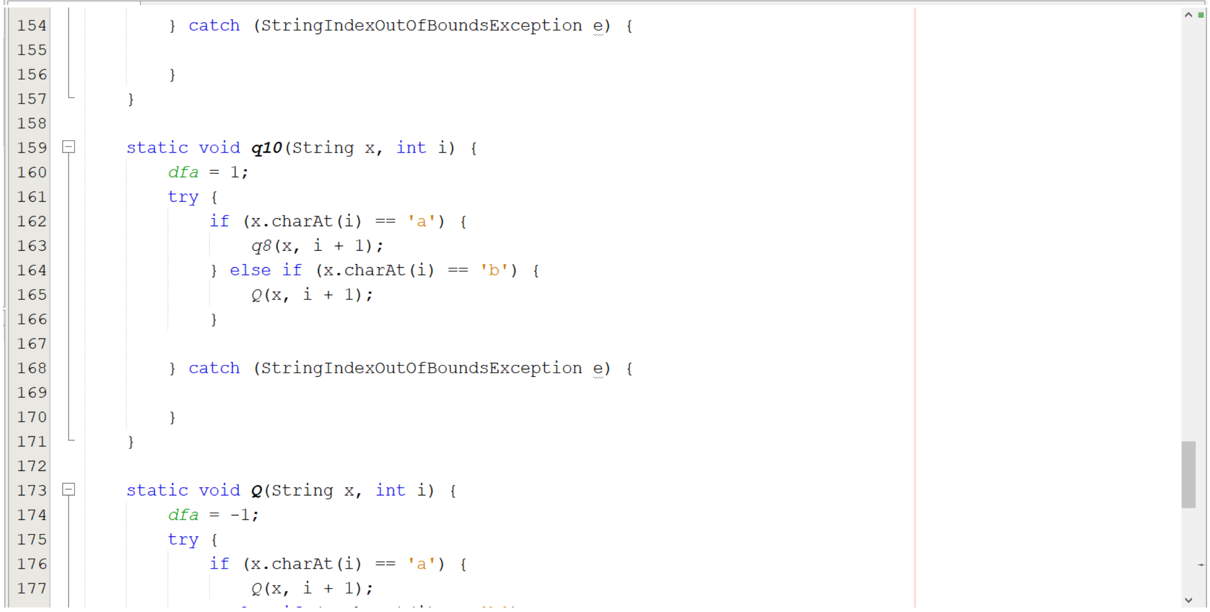
```

        }
    }

    static void q5(String x, int i) {
        dfa = -1;
        try {
            if (x.charAt(i) == 'a') {
                q3(x, i + 1);
            } else if (x.charAt(i) == 'b') {
                q4(x, i + 1);
            }

        } catch (StringIndexOutOfBoundsException e) {

        }
    }

    static void q6(String x, int i) {
        dfa = 1;
        try {
            if (x.charAt(i) == 'a') {
                q8(x, i + 1);
            } else if (x.charAt(i) == 'b') {
                Q(x, i + 1);
```



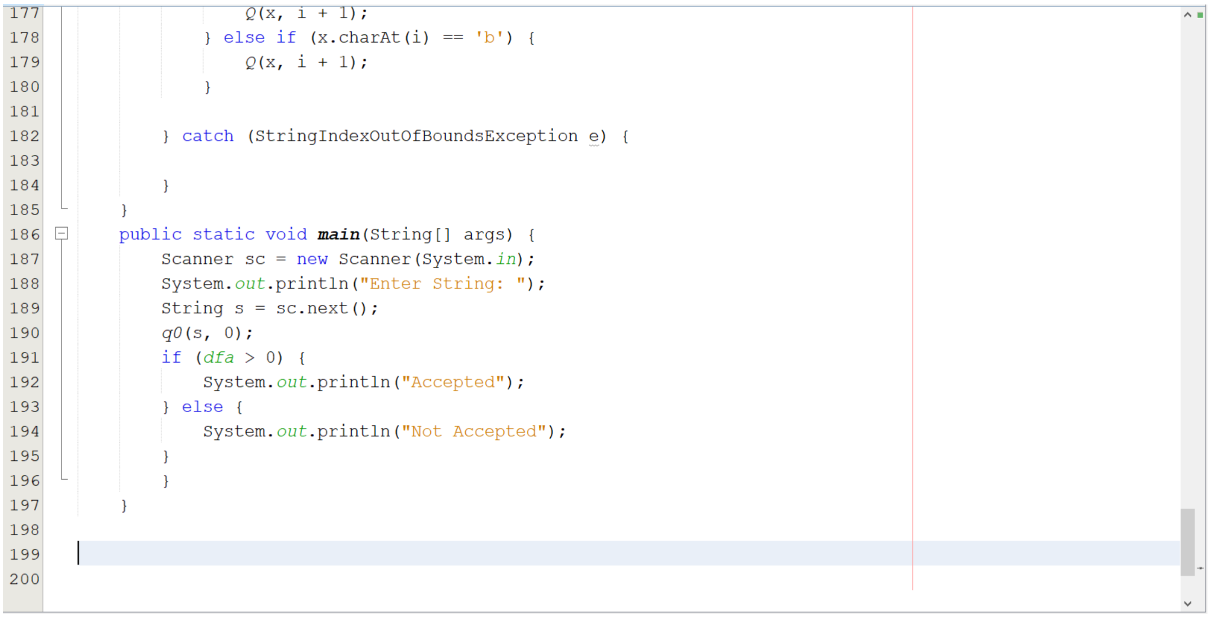
```
            } else if (x.charAt(i) == 'b') {
                Q(x, i + 1);
            }

        } catch (StringIndexOutOfBoundsException e) {

        }
    }

    static void q7(String x, int i) {
        dfa = 1;
        try {
            if (x.charAt(i) == 'a') {
                q9(x, i + 1);
            } else if (x.charAt(i) == 'b') {
                Q(x, i + 1);
            }

        } catch (StringIndexOutOfBoundsException e) {

        }
    }

    static void q8(String x, int i) {
        dfa = 1;
```



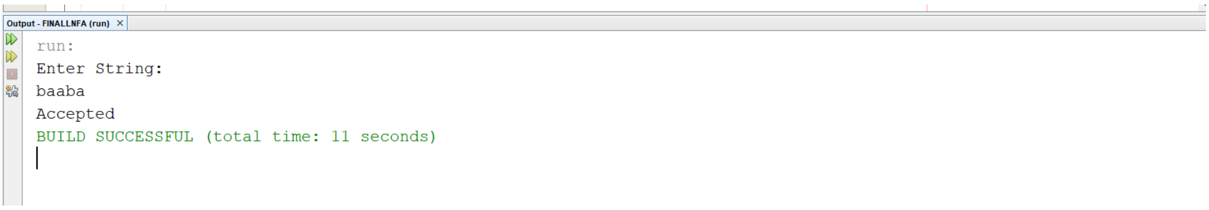
```
    static void q8(String x, int i) {
        dfa = 1;
        try {
            if (x.charAt(i) == 'a') {
                Q(x, i + 1);
            } else if (x.charAt(i) == 'b') {
                q10(x, i + 1);
            }

        } catch (StringIndexOutOfBoundsException e) {

        }
    }

    static void q9(String x, int i) {
        dfa = 1;
        try {
            if (x.charAt(i) == 'a') {
                Q(x, i + 1);
            } else if (x.charAt(i) == 'b') {
                q7(x, i + 1);
            }

        } catch (StringIndexOutOfBoundsException e) {
```



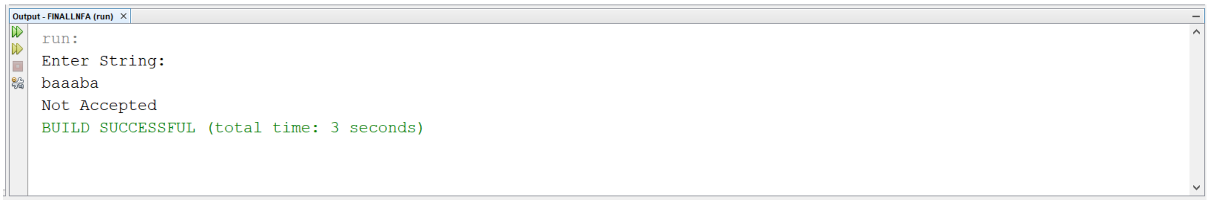
```
        } catch (StringIndexOutOfBoundsException e) {

        }
    }

    static void q10(String x, int i) {
        dfa = 1;
        try {
            if (x.charAt(i) == 'a') {
                q8(x, i + 1);
            } else if (x.charAt(i) == 'b') {
                Q(x, i + 1);
            }

        } catch (StringIndexOutOfBoundsException e) {

        }
    }

    static void Q(String x, int i) {
        dfa = -1;
        try {
            if (x.charAt(i) == 'a') {
                Q(x, i + 1);
```



```
                Q(x, i + 1);
            } else if (x.charAt(i) == 'b') {
                Q(x, i + 1);
            }

        } catch (StringIndexOutOfBoundsException e) {

        }
    }
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter String: ");
        String s = sc.next();
        q0(s, 0);
        if (dfa > 0) {
            System.out.println("Accepted");
        } else {
            System.out.println("Not Accepted");
        }
        }
    }
```

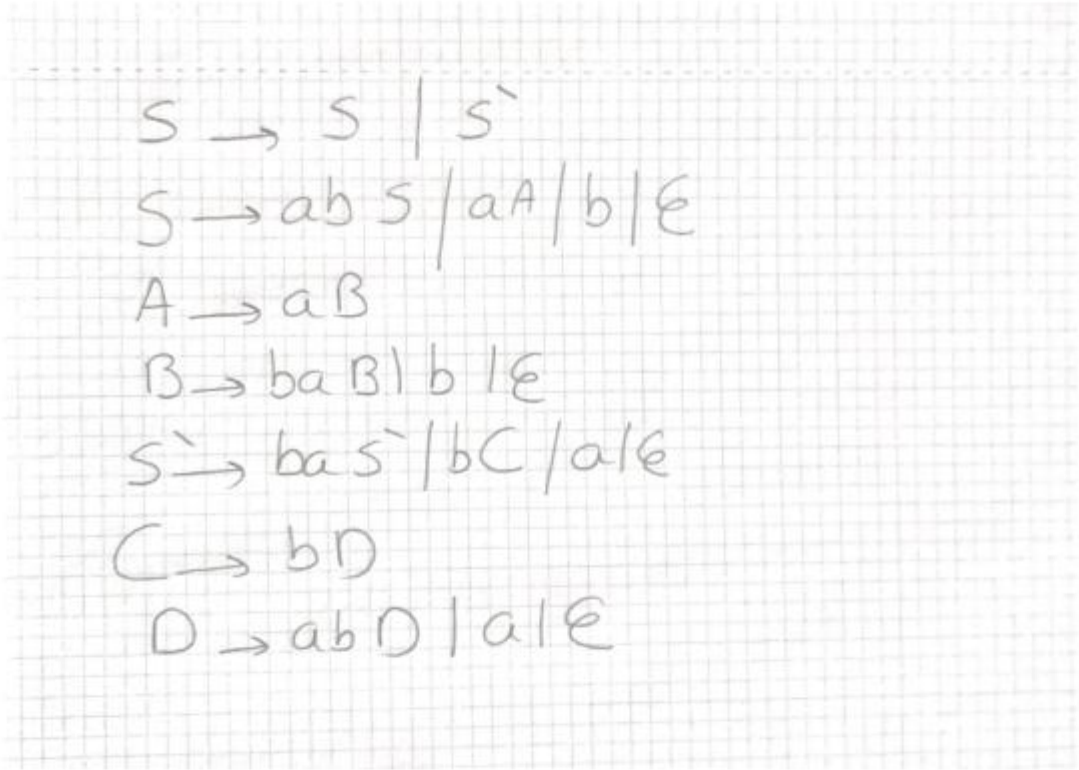


```
run:
Enter String:
baaba
Accepted
BUILD SUCCESSFUL (total time: 11 seconds)
```



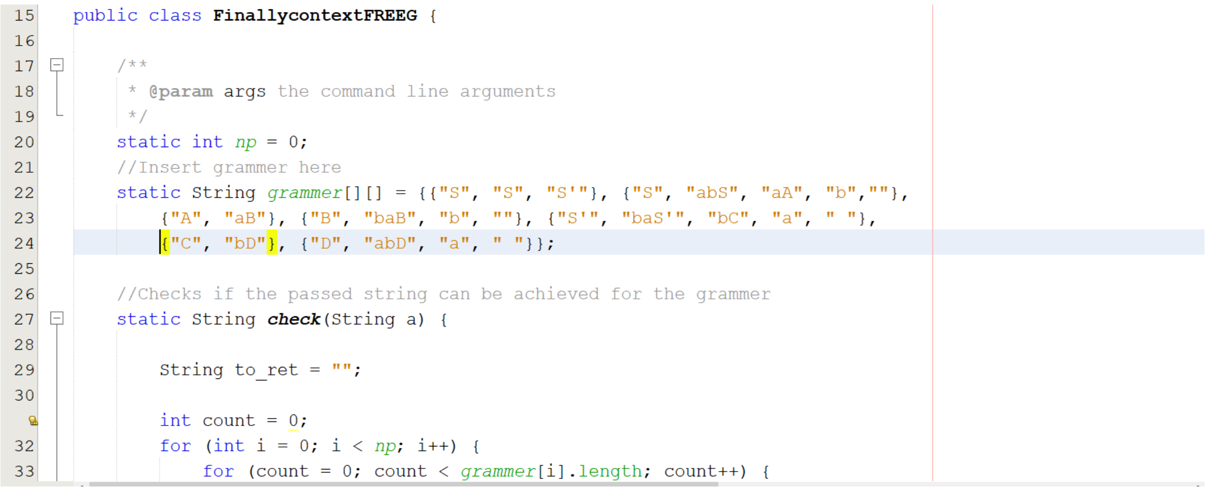
```
run:
Enter String:
baaaba
Not Accepted
BUILD SUCCESSFUL (total time: 3 seconds)
```

CFG:

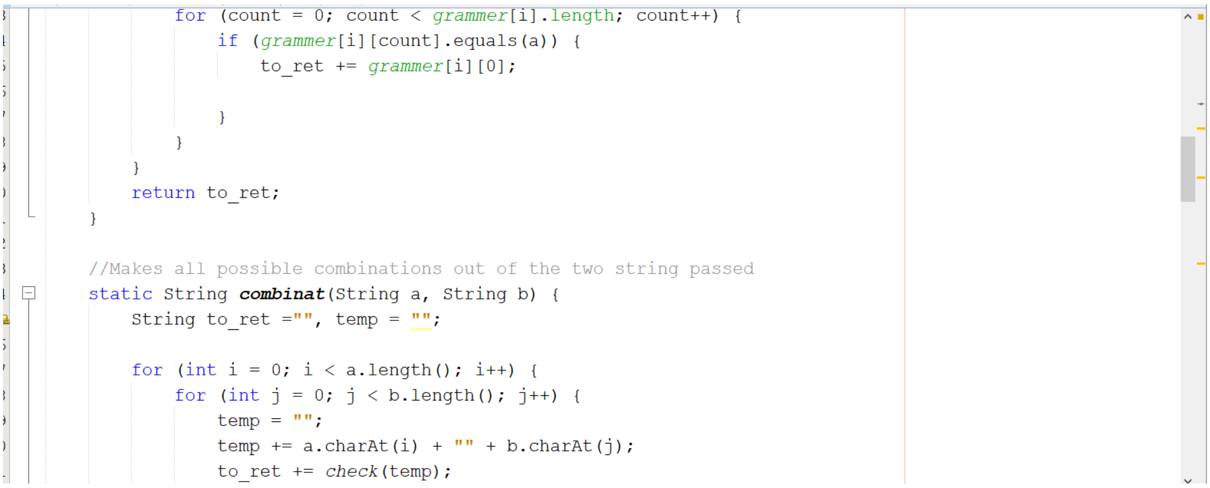


S → S | S`
S → ab S | aA | b | ε
A → aB
B → ba B | b | ε
S` → ba S` | bC | a | ε
C → bD
D → ab D | a | ε

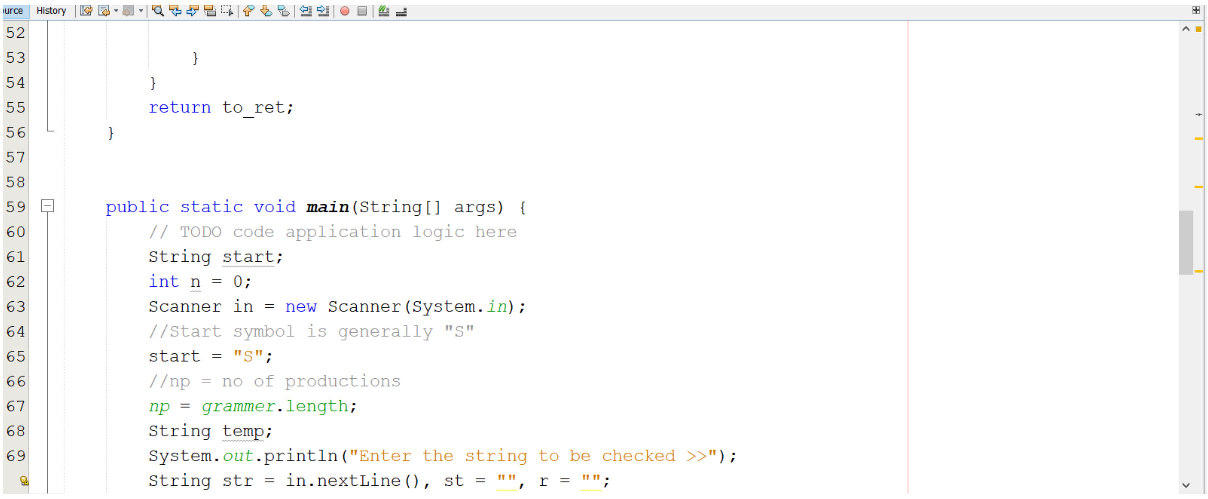
Implementation:



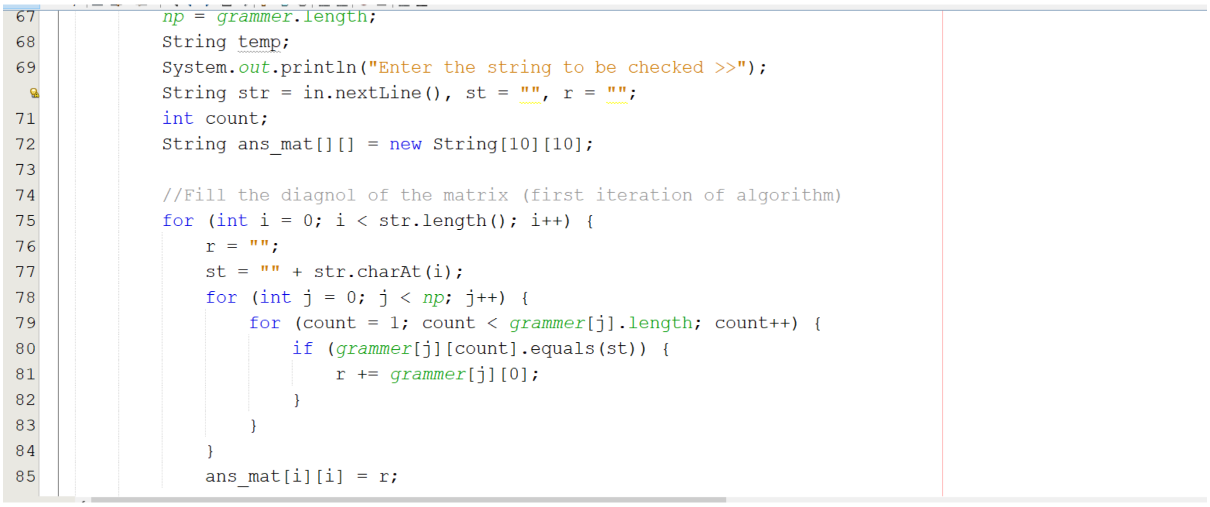
```java
public class FinallycontextFREEG {

    /**
     * @param args the command line arguments
     */
    static int np = 0;
    //Insert grammer here
    static String grammer[][] = {{"S", "S", "S'"}, {"S", "abS", "aA", "b",""},
        {"A", "aB"}, {"B", "baB", "b", ""}, {"S'", "baS'", "bC", "a", " "},
        {"C", "bD"}, {"D", "abD", "a", " "}};

    //Checks if the passed string can be achieved for the grammer
    static String check(String a) {

        String to_ret = "";

        int count = 0;
        for (int i = 0; i < np; i++) {
            for (count = 0; count < grammer[i].length; count++) {
```



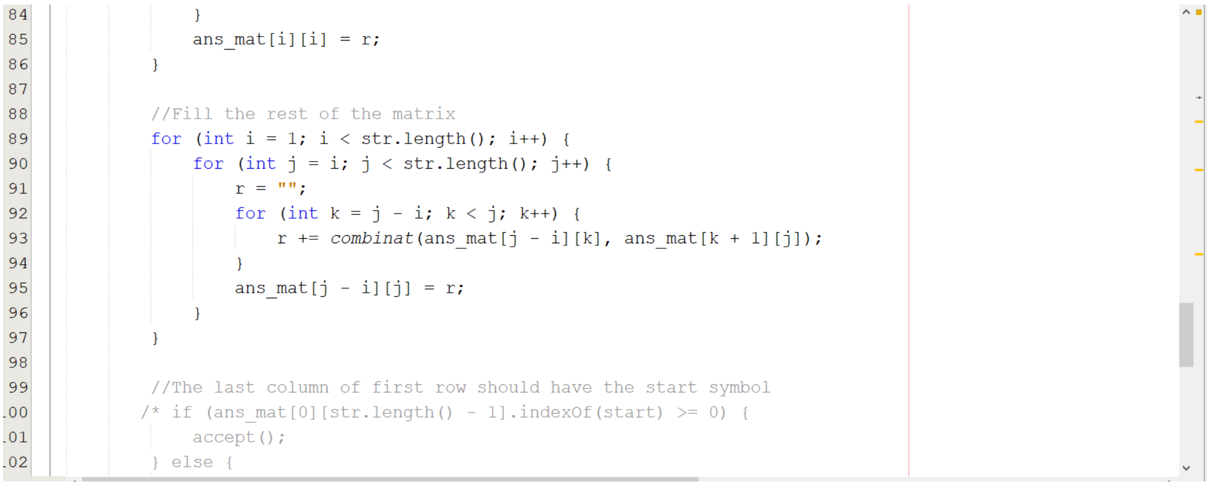
```java
            for (count = 0; count < grammer[i].length; count++) {
                if (grammer[i][count].equals(a)) {
                    to_ret += grammer[i][0];

                }
            }
        }
        return to_ret;
    }

    //Makes all possible combinations out of the two string passed
    static String combinat(String a, String b) {
        String to_ret ="", temp = "";

        for (int i = 0; i < a.length(); i++) {
            for (int j = 0; j < b.length(); j++) {
                temp = "";
                temp += a.charAt(i) + "" + b.charAt(j);
                to_ret += check(temp);
```



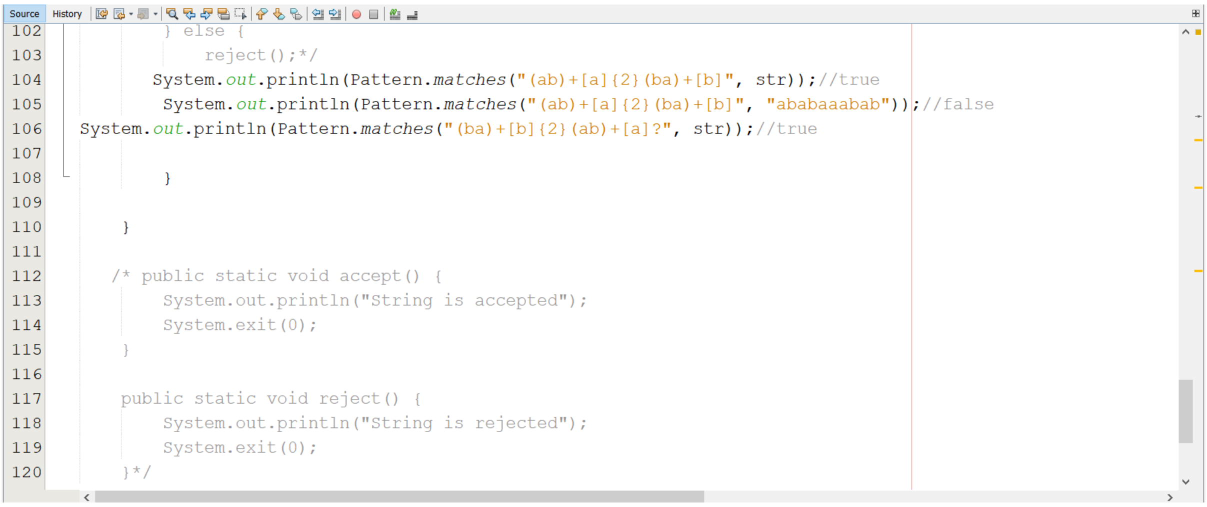
```java
            }
        }
        return to_ret;
    }


    public static void main(String[] args) {
        // TODO code application logic here
        String start;
        int n = 0;
        Scanner in = new Scanner(System.in);
        //Start symbol is generally "S"
        start = "S";
        //np = no of productions
        np = grammer.length;
        String temp;
        System.out.println("Enter the string to be checked >>");
        String str = in.nextLine(), st = "", r = "";
```



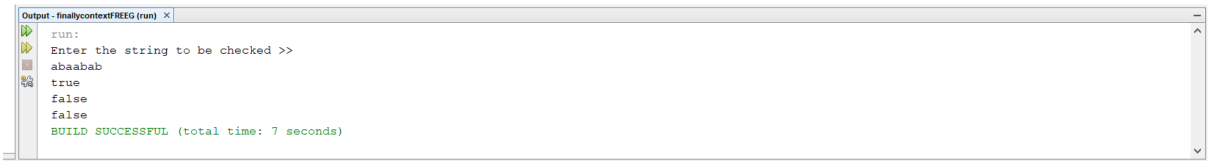
```
        np = grammer.length;
        String temp;
        System.out.println("Enter the string to be checked >>");
        String str = in.nextLine(), st = "", r = "";
        int count;
        String ans_mat[][] = new String[10][10];

        //Fill the diagnol of the matrix (first iteration of algorithm)
        for (int i = 0; i < str.length(); i++) {
            r = "";
            st = "" + str.charAt(i);
            for (int j = 0; j < np; j++) {
                for (count = 1; count < grammer[j].length; count++) {
                    if (grammer[j][count].equals(st)) {
                        r += grammer[j][0];
                    }
                }
            }
            ans_mat[i][i] = r;
```



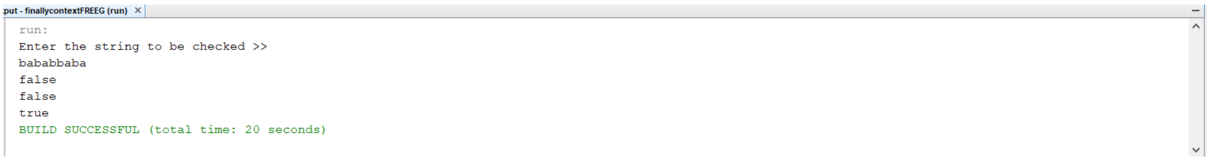
```
            }
            ans_mat[i][i] = r;
        }

        //Fill the rest of the matrix
        for (int i = 1; i < str.length(); i++) {
            for (int j = i; j < str.length(); j++) {
                r = "";
                for (int k = j - i; k < j; k++) {
                    r += combinat(ans_mat[j - i][k], ans_mat[k + 1][j]);
                }
                ans_mat[j - i][j] = r;
            }
        }

        //The last column of first row should have the start symbol
       /* if (ans_mat[0][str.length() - 1].indexOf(start) >= 0) {
            accept();
        } else {
```



```
        } else {
            reject();*/
       System.out.println(Pattern.matches("(ab)+[a]{2}(ba)+[b]", str));//true
        System.out.println(Pattern.matches("(ab)+[a]{2}(ba)+[b]", "ababaaabab"));//false
System.out.println(Pattern.matches("(ba)+[b]{2}(ab)+[a]?", str));//true

        }

    }

   /* public static void accept() {
        System.out.println("String is accepted");
        System.out.exit(0);
    }

    public static void reject() {
        System.out.println("String is rejected");
        System.exit(0);
    }*/
```



```
run:
Enter the string to be checked >>
abaabab
true
false
false
BUILD SUCCESSFUL (total time: 7 seconds)
```



```
run:
Enter the string to be checked >>
bababbaba
false
false
true
BUILD SUCCESSFUL (total time: 20 seconds)
```