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**Practical 02**

**AIM:** Create a machine that checks whether a string has three consecutive ones.

**Code:**

import java.util.Scanner;

public class Design {

String str;

int len;

int comp = 0;

void initial() {

System.out.println("Input strings of 1 and 0\n");

Scanner obj = new Scanner(System.in);

str = obj.nextLine();

len = str.length();

if (len > 0) {

for (int i = 0; i < len; i++) {

char b1 = str.charAt(i);

if (b1 != '1' && b1 != '0') {

System.out.println("Please provide a valid string");

System.exit(0);

}

}

first();

}

}

void first() {

checkPattern('1', this::second);

}

void second() {

checkPattern('1', this::third);

}

void third() {

checkPattern('1', this::last);

}

void last() {

if (comp < len) {

comp++;

last();

} else {

System.out.println("String will be accepted");

System.exit(0);

}

}

void checkPattern(char expected, Runnable nextStep) {

if (comp < len) {

char a1 = str.charAt(comp);

if (a1 == expected) {

comp++;

nextStep.run();

} else {

comp++;

first();

}

} else {

System.out.println("Not a valid string");

}

}

public static void main(String[] args) {

Design d1 = new Design();

d1.initial();

}

}

**OUTPUT:**

