



Program to bookmark doctor or patient:

```

source_token = dataD['source_token'];

destination_token = dataD['destination_token'];

status = dataD['status'];

role = dataD['role'];

cur = mysql.connection.cursor();

if (status == 1){

    cur.execute("INSERT into bookmarks(b_source,b_destination) VALUES (%s,%s)",

                (source_token, destination_token));

    mysql.connection.commit();


    if role == 2 {

        jsonify(status=True, message="Added to My Patients");

    }

}

if (status == 0){

    cur.execute("DELETE FROM bookmarks WHERE b_source=%s AND b_destination=%s",

                (source_token, destination_token));

    mysql.connection.commit();


    if role == 2 {

        jsonify(status=False, message="Removed from My Patients");

    }

}
  
```

```

    }
    else{
        jsonify(status=True, message="Added to My Doctors");
    }
    END;
}
else{
    cur.execute("DELETE FROM bookmarks WHERE b_source=%s AND b_destination=%s",
        (source_token, destination_token));
    mysql.connection.commit();
    if role == 2{
        jsonify(status=False, message="Removed from My Patients");
    }
    else{
        jsonify(status=False, message="Removed from My Doctors");
    }
}
END;

```

CYCLOMATIC COMPLEXITY

- (i) $V(G) = E - N + 2 = 19 - 16 + 2 = 5$
- (ii) $V(G) = \text{Nos of predicate nodes} + 1 = 0 + 1 = 1$
- (iii) $V(G) = \text{Nos of regions} = 4$

INDEPENDENT PATHS

1-2-3-4-5-6-7-9-11-12-16

1-2-3-4-5-6-7-9-11-13-16

1-2-3-4-5-6-8-10-12-14-16

1-2-3-4-5-6-8-10-12-15-16

TEST CASE ID	EXPECTED RESULT	INDEPENDENT PATH
1	Add doctor to bookmarks	1-2-3-4-5-6-7-9-11-12-16
2	Remove doctor from bookmarks	1-2-3-4-5-6-7-9-11-13-16
3	Add patient to bookmarks	1-2-3-4-5-6-8-10-12-14-16
4	Remove patient from bookmarks	1-2-3-4-5-6-8-10-12-15-16