**Group members**

1. NN Dlodlo 22325063

2. LG Duba 22416734

3. NS Gumede 22330175

4. A Khomo 22407383

**Directed Graph**

[5]Residence A

[9]Main Entrance

[8]Sport Complex

[7]Cafeteria

[2]Science Lab

[3]Library

[0] Admin building

[4]ICT department

[6]Residence B

[1]Engineering block

**Adjacency Matrix**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| **0** | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| **1** | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **2** | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| **3** | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| **4** | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **5** | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| **6** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| **7** | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| **8** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **9** | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Adjacency List (Hash map)**

{0: [3

1: [2]

2: [7

3: [4, 8]

4: [1]

5: [6]

6: [9]

7: [5]

8: []

9: [0]}