**Group H Task DBSCAN**

A dataset consisting of object A, B, C, D, E, F, G, H with the following distance matrix is given:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** |
| **A** |  | **2** | **7** | **8** | **9** | **10** | **7** | **4** |
| **B** |  |  | **6** | **7** | **8** | **9** | **8** | **7** |
| **C** |  |  |  | **4** | **8** | **9** | **7** | **8** |
| **D** |  |  |  |  | **9** | **11** | **11** | **9** |
| **E** |  |  |  |  |  | **3** | **2** | **10** |
| **F** |  |  |  |  |  |  | **4** | **11** |
| **G** |  |  |  |  |  |  |  | **12** |
| **H** |  |  |  |  |  |  |  |  |

Assume DBSCAN is run for this dataset with MINPOINTS[[1]](#footnote-1)=3 and epsilon=ε=5

How many clusters will DBSCAN return and how do they look like? Which objects are core points which objects are outliers/noise points and which objects are border points?

How does the result change if we increase the parameter MINPOINTS from 3 to 4?

1. The object itself counts towards the number of objects in its ε-radius when determining core points! [↑](#footnote-ref-1)