1. Relationship between n and m:

As the graph shows down below, the relationship between number of pairs(m) and objects(n) follows power trending. It performs like this is that the time it consumes when connecting nodes in the graph near to a linear trend.

The data generated by client in different n shows below.

Table

Description automatically generated

1. The screenshot down below shows all the test cases pass when running UF\_HWQUPC\_TEST to test out if the implementation of union find is working.

Graphical user interface, text, application

Description automatically generated