Exercise 4

1. When running the learner with a non random importance function, the learner always returns 75% of the tests correctly. I do not know why it fails on some of the tests. Maybe the test data contains some noise?
   When running the learner with a random importance function it classifies ~28% - 100% of the tests correctly. As my code stands it is better to run multiple random runs and cross examine them to find the correct answers since the non random version consistently fails on the same data sets.

2. The random importance returns different results each run.

3. The importance based on information gain returns the same result each time.

4. The tree can be found in both JSON and graphical format on the last pages. I don't know why 'attributt 0' exists as both root and a leaf node, this may be the error that prevents the algorithm from classifying the last 25% correctly.

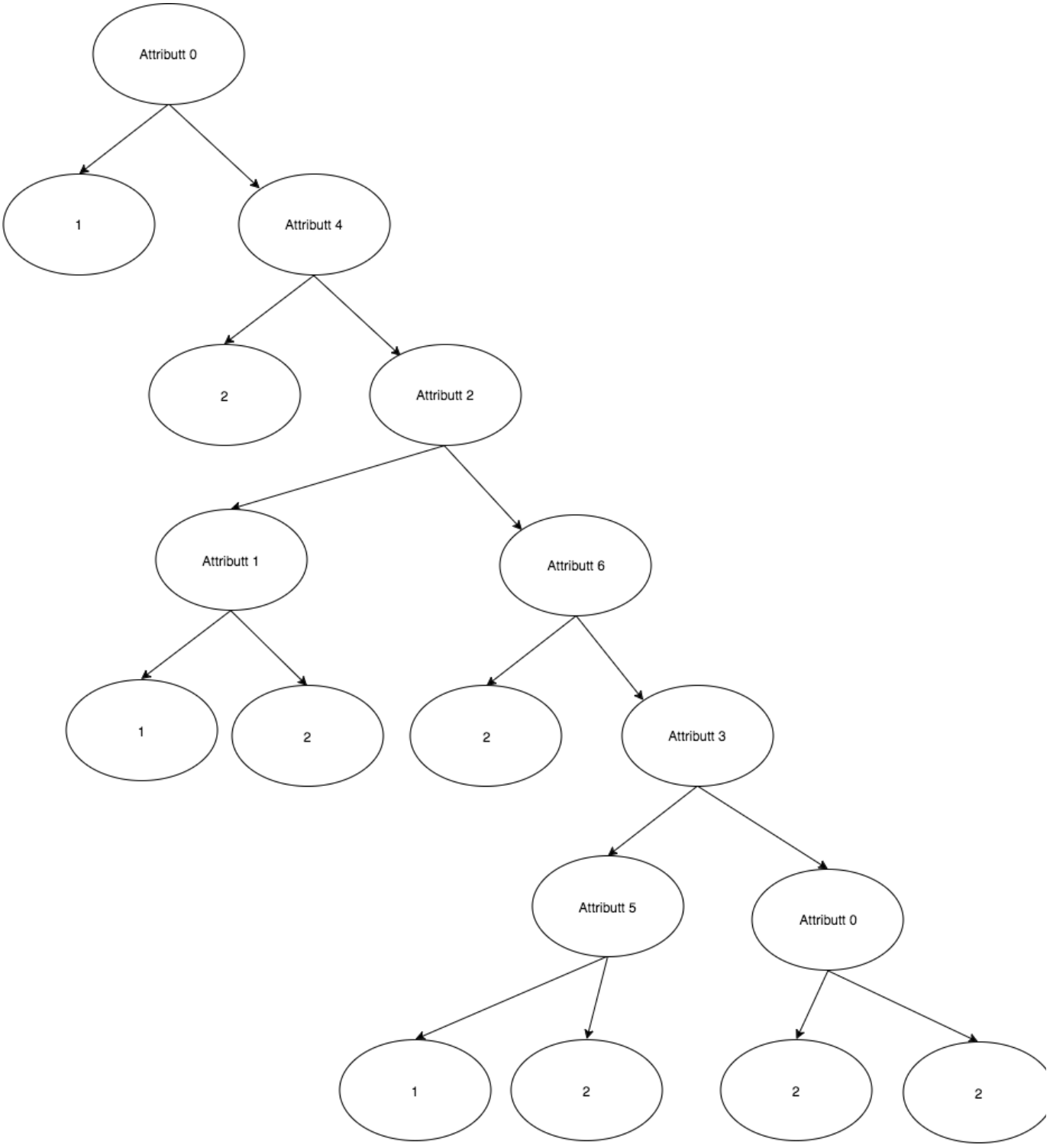
HowTo run:

1. Unpack zip

2. Have node installed

3. Navigate to project folder with terminal

4. run 'node program.js'


Attributt 0
1
Attributt 4
2
Attributt 2
Attributt 1
Attributt 6
1
2
2
Attributt 3
Attributt 5
Attributt 0
1
2
2
2

```
{
   "0": [
      "1",
      {
         "4": [{
               "2": [{
                     "1": [
                        "1",
                        "2"
                     ]
                  },
                  {
                     "6": [{
                           "3": [{
                                 "5": [
                                    "1",
                                    "2"
                                 ]
                              },
                              {
                                 "0": [
                                    2,
                                    2
                                 ]
                              }
                           ]
                        },
                        2
                     ]
                  }
               ]
            },
            2
         ]
      }
   ]
}
```