

1. I add an if statement in addEdge() in Graph class. I check if the edge we want to add is reflexive. Add the Edge only if not reflexive. Because the implementation in hw4 allows self-pointing edges but hw5 doesn't.

I add the following code(in red)

```
if (!e.getStart().equals(e.getEnd())){
    if (adj_lst.containsKey(e.getStart())){
        adj_lst.get(e.getStart()).add(e);
    }
    else{
        ArrayList<Edge> arr = new ArrayList<Edge>();
        arr.add(e);
        adj_lst.put(e.getStart(),arr);
    }
    this.edge_num++;
}
```

2. I removed an exception thrown in addNode() in Graph class. Because this will stop the program if a node already exists which we want it to continue.

I remove the following code:

```
else{
    throw new RuntimeException("node already exist!");
}
```