Mandatory Assignement 5.

1. 1. Done

2. See hand-drawn diagram.

1. 1. Done

2. Copying resources is generally to be preferred, it won’t break encapsulation of the object and lead to unwanted behavior and side effects. However, it is less memory efficient and in certain scenarios that makes it inferior to copying the references, also there are scenarios where you want to couple data through shared references so in those cases it is preferable to copy the reference as well.

3. Done

4. See hand-drawn diagram.

5. See hand-drawn diagram.

6. It’s alright for the object to have it’s own array of vertices, however, when vertices are stored and removed frequently memory efficiency suffers because an array of almost equal size has to be created each time which can be a drain on efficiency.

1. The program defaults to the polyline in the first index position.
2. 1. Done.

2. The only changes in the iterator is that the index increases until it is out of bounds and then returns to it’s initial value while feeding the corresponding objects to the caller.