Design

The Racer2D Application is developed in C++ language with GUI using freeglut library for visualization and interaction. The design approach adopted for graphics, storing and simulating game objects is depicted in the figure 1
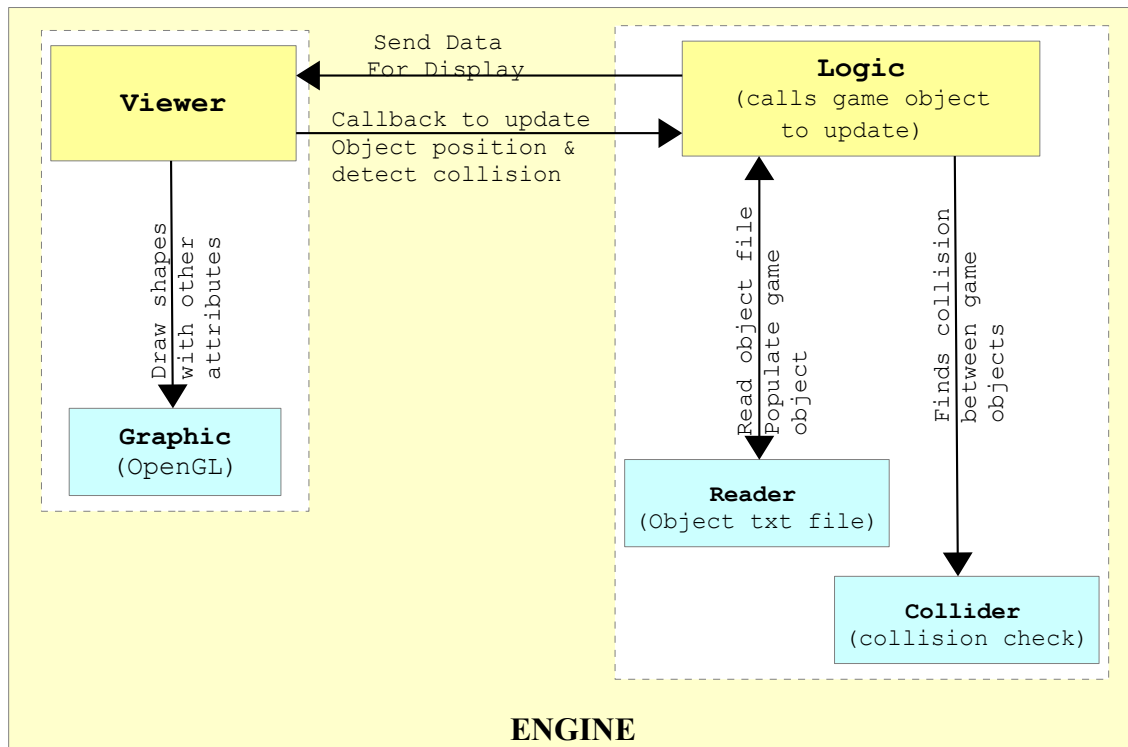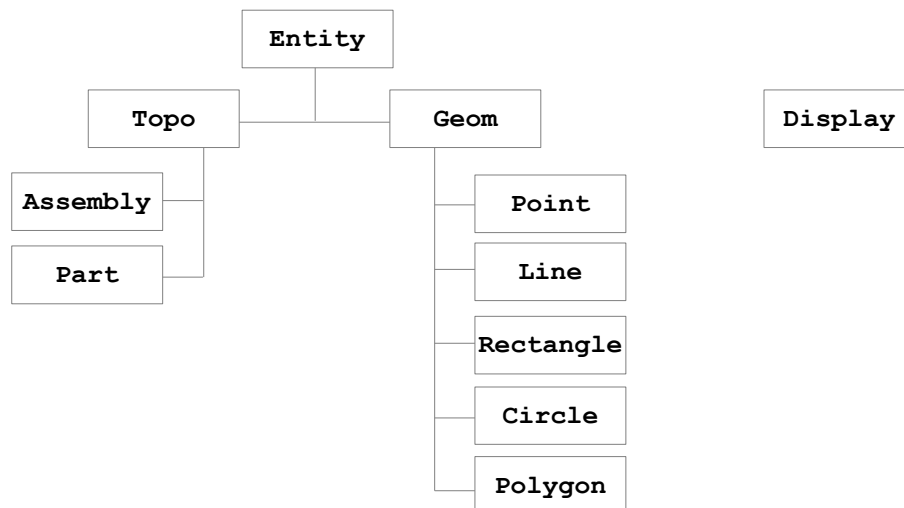

Figure 1

Core Data

Object Data

Assembly

Roof

Window

Body

Rear Wheel Front Wheel

Assembly

Car data

Assembly CAR

Part 1 Body | Part 2 Roof | Part 3 Window | Part 4 Rear Wheel | Part 5 Front Wheel

Geom Rectangle | Geom Rectangle | Geom Rectangle | Geom Circle | Geom Circle

Car data

Path

Line 4
Line 5
Line 3
Path
Line 6
Line 2
Line 1

Path

Path Array

Geom Line | Geom Line | Geom Line

Part 5 inclined — Next — Part 4 straight — Next — Part 3 inclined

Next

Next

Part 6 inclined — Next — Part 1 straight — Next — Part 2 inclined

Geom Line | Geom Line | Geom Line

Path Array

Objects Attributes
Speed

Object