

MIDDLESEX UNIVERSITY - HENDON

# CMT3006 Internet Game Programming

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## Coursework 2

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# CMT3006 CaRace Game

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## How to play the game?

Gamer can press,

- 'p' to play the game
- 'q' to stop the game
- 'd' to turn the gamer's car right
- 'a' to turn the gamer's car left
- 'w' to accelerate the gamer's car
- 's' to slow and stop the car; works as brake
- 'n' to switch the gear to neutral
- 'f' to switch the gear to first
- 'g' to switch the gear to second
- 'h' to switch the gear to third
- 'j' to switch the gear to fourth
- 'r' to switch the gear to reverse

Accelerator only increases the car engine's RPM, so when the gear is engaged only car starts to move. When car moves slow, steering the car also will be slow. When the car start to move fast, steering the car will be easy and fast.

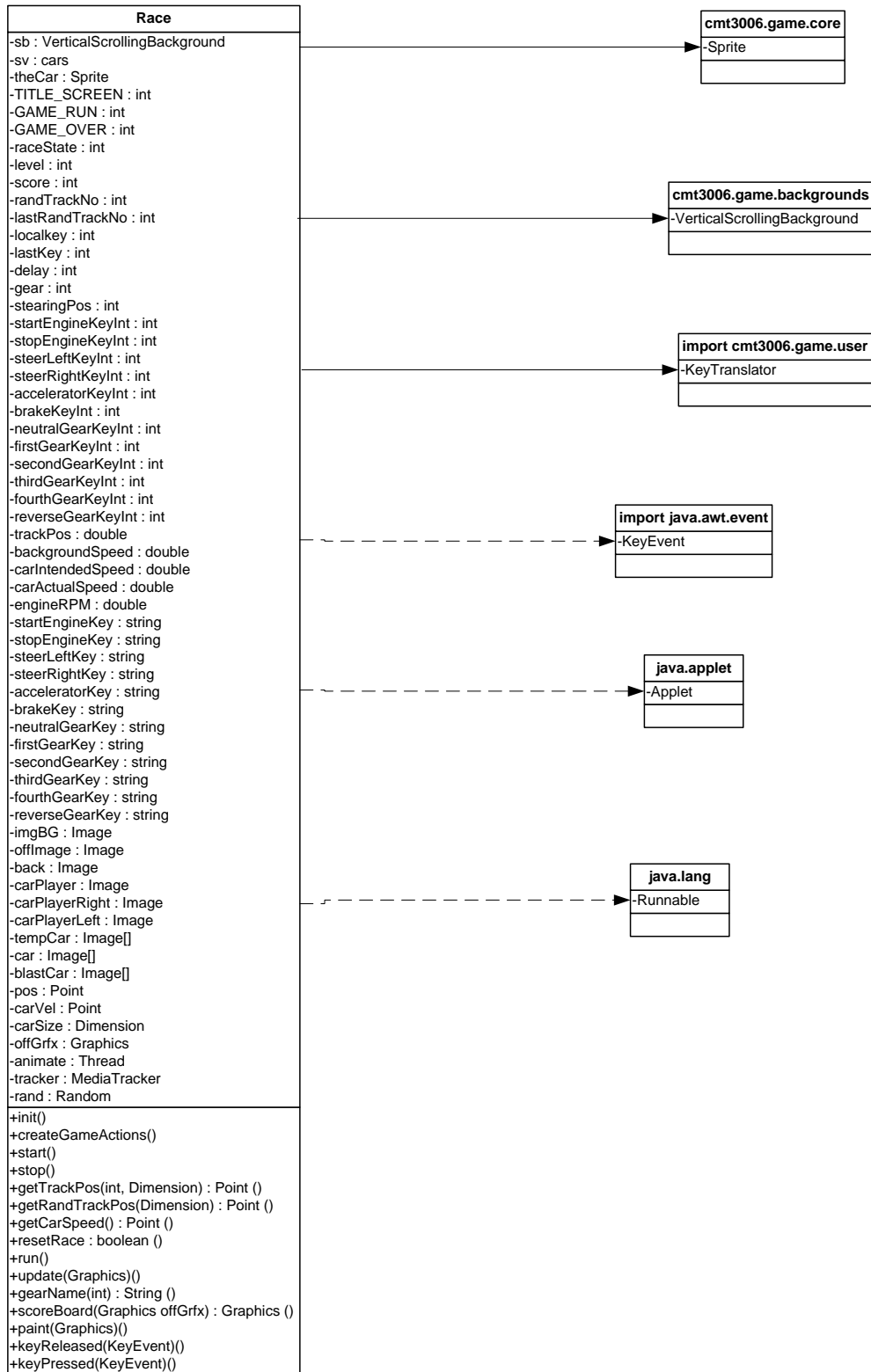
## Game Logic

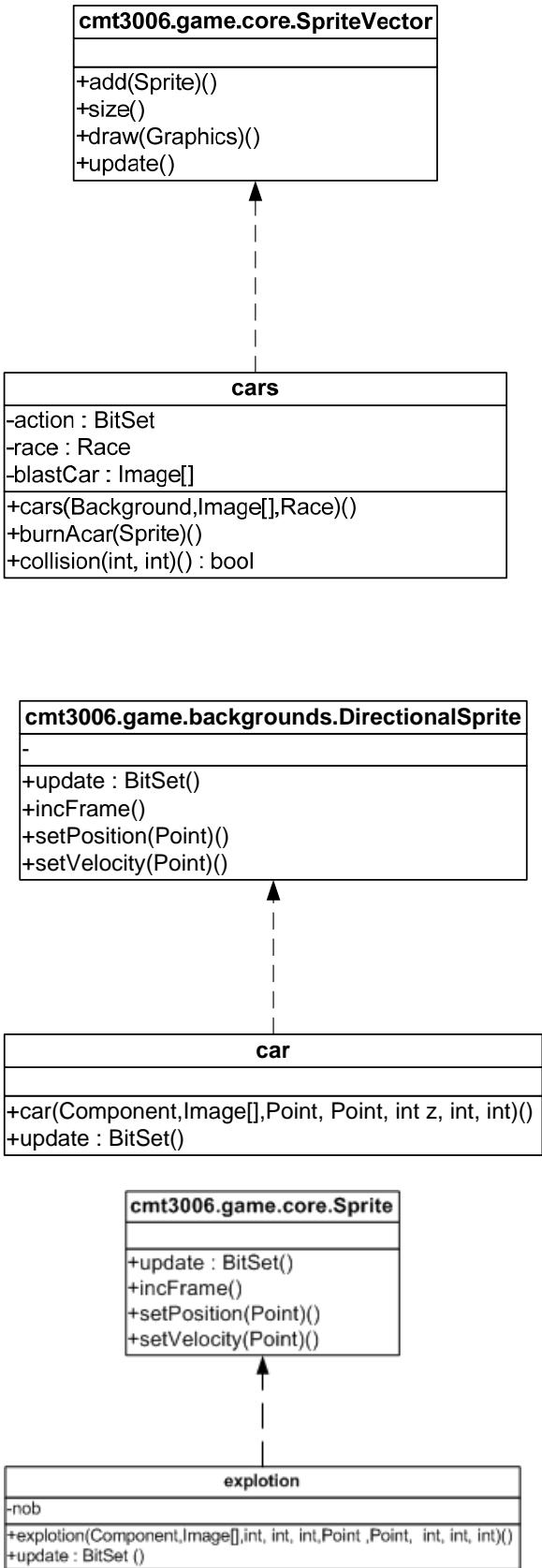
Game starts with the initial score 100 and when each car leaves away without any accident, 5 points will be added to the score. When a car crashes, 10 points will be deducted from the total score. When score becomes 0, Game Over and when the gamer score every 1000 points, level of the game will be increased by 1. Hardness of the game proportionately increases with level.

## How the game has been developed?

I have developed this game using **JAVA JDK version 1.6.0\_07** and with the full usage of cmt3006 API. In this game, I have used `cmt3006.game.backgrounds.VerticalScrollingBackground` to represent the road, `cmt3006.game.core.Sprite` to represent gamer's car and explosion and all the other cars are with the usage of `cmt3006.game.directions.DirectionSprite`. I have created my own "Sprite", "DirectionSprite" and "SpriteVector" classes to override some of the methods and get a better use of those classes. The main "Race" class extends `java.applet.Applet` and implements `java.lang.Runnable` and `java.awt.event.KeyListener` interfaces.

# Class Diagrams





## Screenshots of the game

The initial screen of CMT3006 CaRace Game (Figure 1)



The main screen of CMT3006 CaRace (Figure 2)

