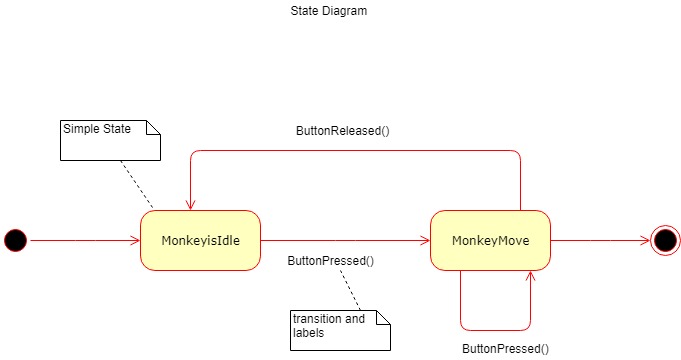
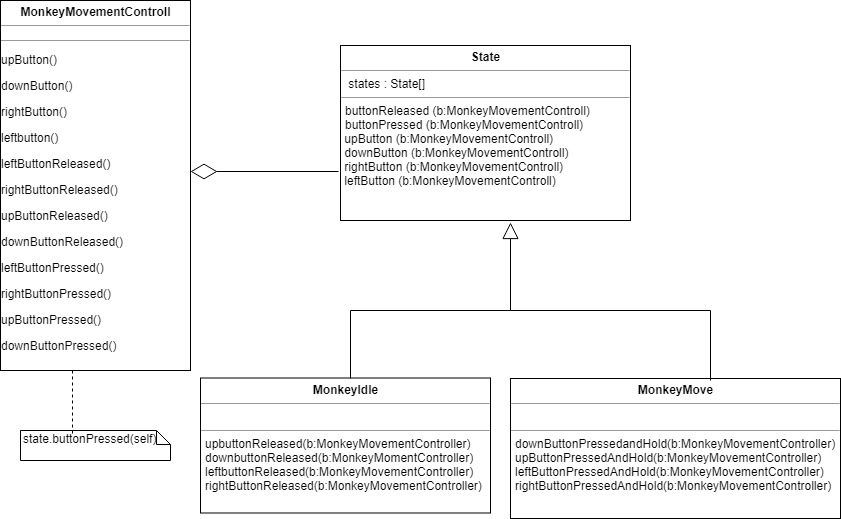
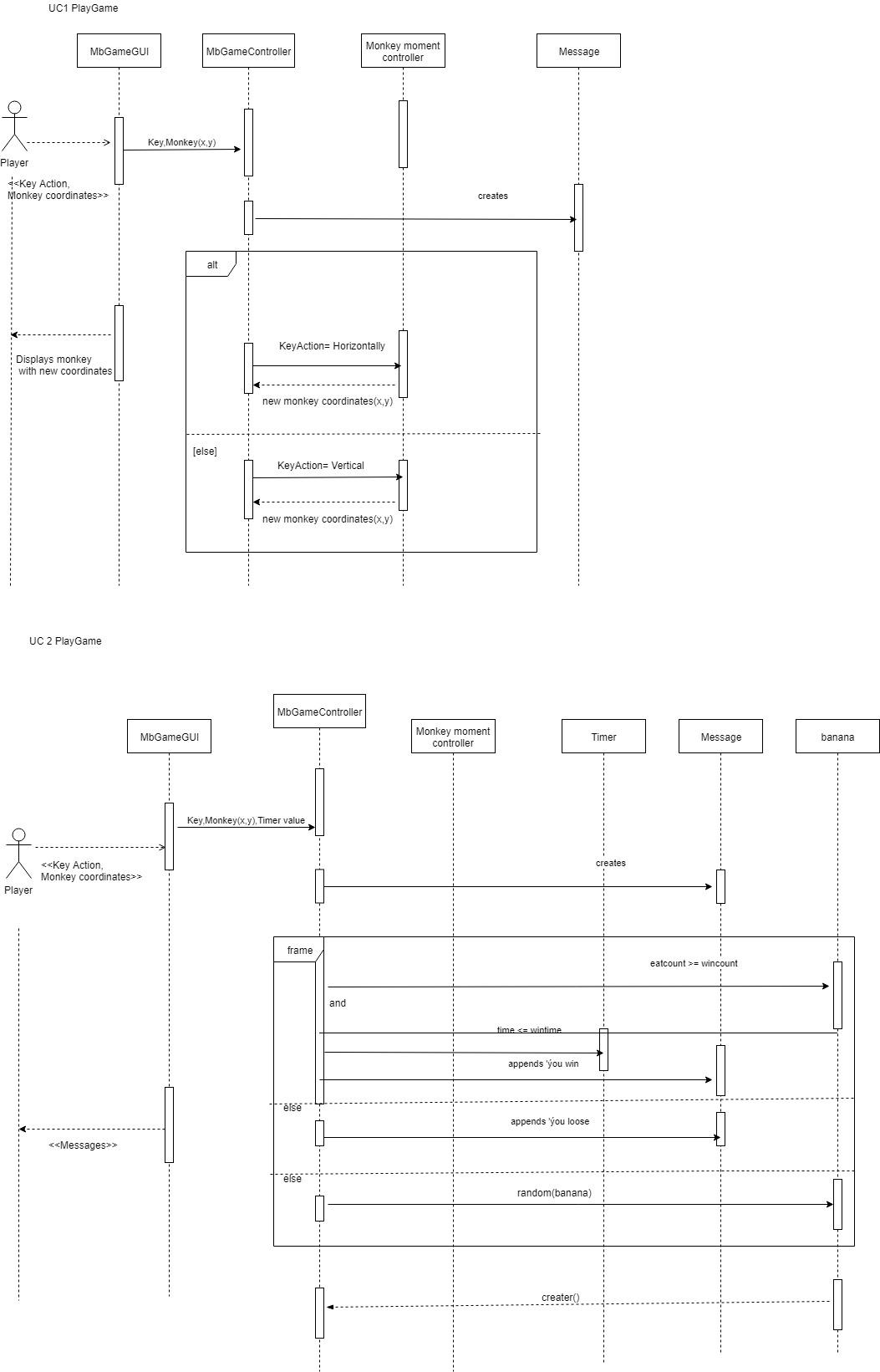
State diagram:



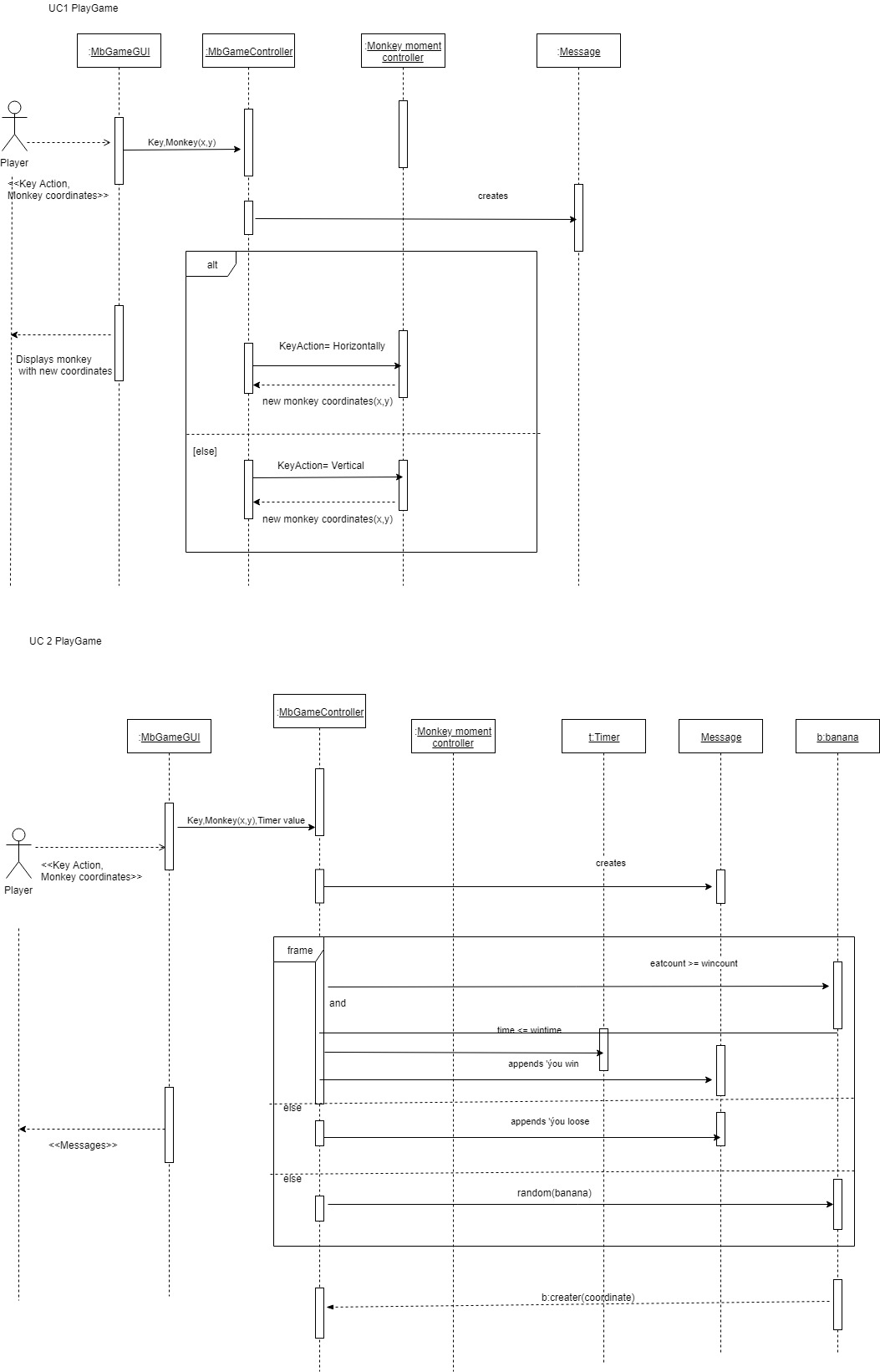
State Pattern:



Informal Sequence diagram:



Formal Sequence diagram:



Design class diagram:

