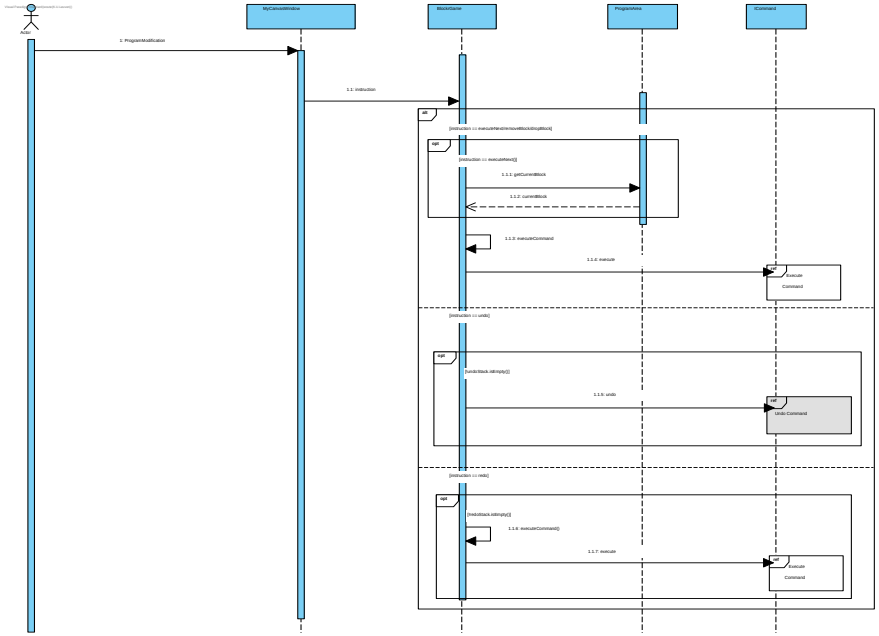
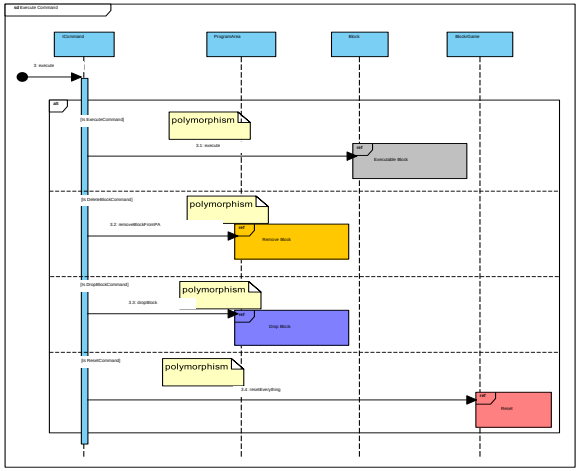
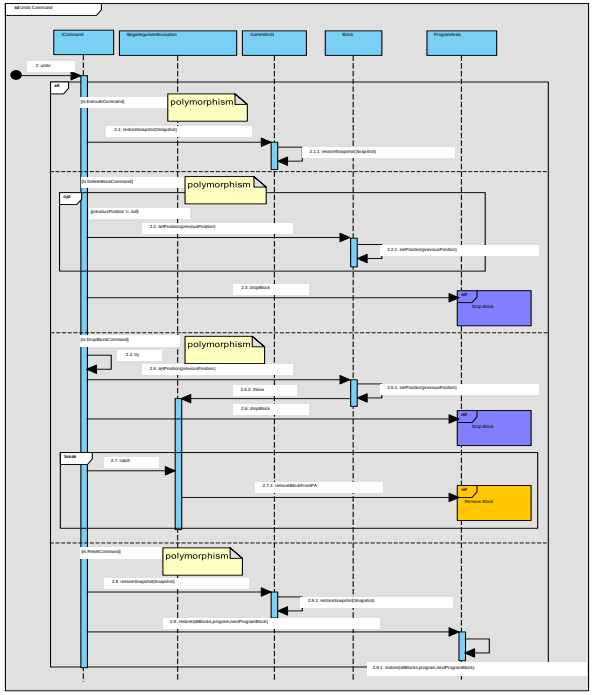
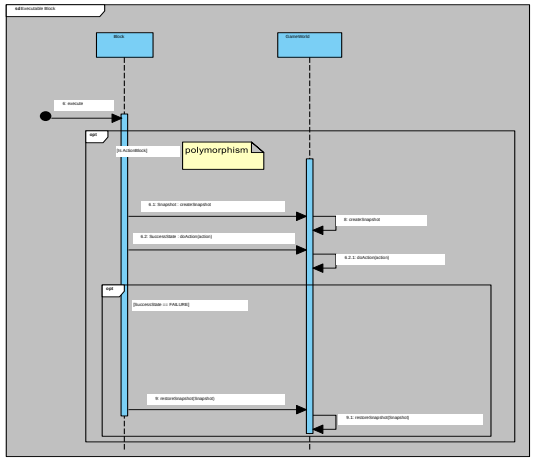
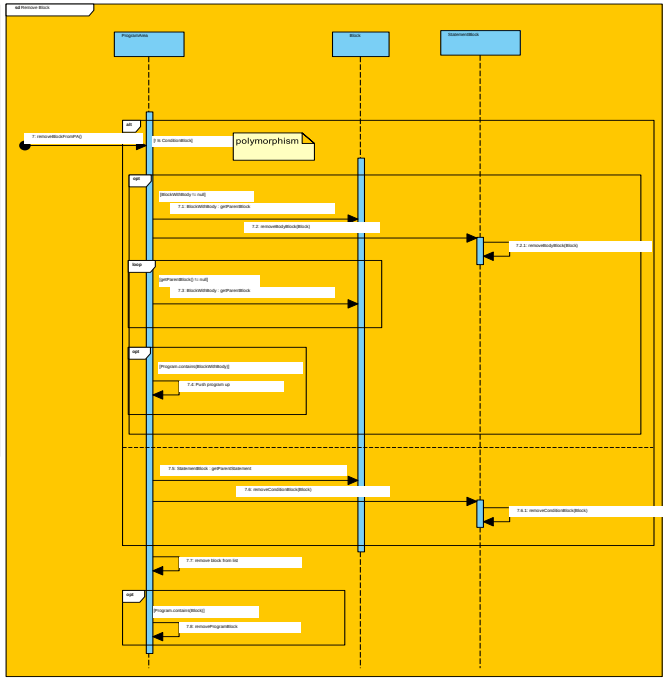
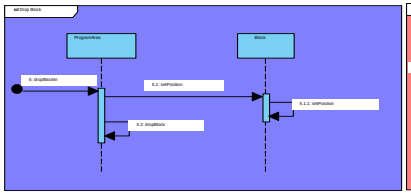

Actor
MyCanvasWindow
BlockGame
ProgramArea
ICommand
1: ProgramModification
1.1: instruction
alt
[instruction == executeNext||removeBlock||dropBlock]
opt
[instruction == executeNext()]
1.1.1: getCurrentBlock
1.1.2: currentBlock
1.1.3: executeCommand
1.1.4: execute
Execute Command
[instruction == undo()]
opt
[undoStack.isEmpty()]
1.1.5: undo
Undo Command
[instruction == redo]
opt
[redoStack.isEmpty()]
1.1.6: executeCommand()
1.1.7: execute
Execute Command

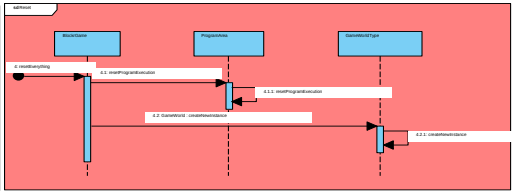

sd Execute Command
ICommand
ProgramArea
Block
BlockGame
3: execute
alt
[is ExecuteCommand]
polymorphism
3.1: execute
Executable Block
[is RemoveBlockCommand]
polymorphism
3.2: removeBlockFromPA
Remove Block
[is DropBlockCommand]
polymorphism
3.3: dropBlock
Drop Block
[is ResetCommand]
polymorphism
3.4: resetEverything
Reset


sd Undo Command
ICommand
IllegalArgumentException
GameWorld
Block
ProgramArea
2: undo
alt
[is ExecuteCommand]
polymorphism
2.1: restoreSnapshot(Snapshot)
2.1.1: restoreSnapshot(Snapshot)
[is DeleteBlockCommand]
polymorphism
opt
[previousPosition != null]
2.2: setPosition(previousPosition)
2.2.1: setPosition(previousPosition)
2.3: dropBlock
Drop Block
[is DropBlockCommand]
polymorphism
2.4: try
2.5: setPosition(previousPosition)
2.5.1: setPosition(previousPosition)
2.5.2: throw
2.6: dropBlock
Drop Block
break
2.7: catch
2.7.1: removeBlockFromPA
Remove Block
[is ResetCommand]
polymorphism
2.8: restoreSnapshot(Snapshot)
2.8.1: restoreSnapshot(Snapshot)
2.9: restore(allBlocks,program,newProgramBlock)
2.9.1: restore(allBlocks,program,newProgramBlock)


sd Executable Block
Block
GameWorld
8: execute
opt
[is AutoBlock]
polymorphism
8.1: Snapshot : createSnapshot
8: createSnapshot
8.2: SuccessState : doAction(action)
8.2.1: doAction(action)
opt
[SuccessState == FAILURE]
9: restoreSnapshot(Snapshot)
9.1: restore(Snapshot)


sd Remove Block
ProgramArea
Block
ConditionBlock
7: removeBlockFromPA()
alt
[is ConditionBlock]
polymorphism
opt
[BlockWithBody != null]
7.1: BlockWithBody : getParentBlock
7.2: removeBody(Block)
7.2.1: removeBody(Block)
loop
[getParentBlock != null]
7.3: BlockWithBody : getParentBlock
opt
[Program.contains(BlockWithBody)]
7.4: Push program up
7.5: StatementBlock : getParentStatement
7.6: removeConditionBlock(Block)
7.6.1: removeConditionBlock(Block)
7.7: remove block from list
opt
[Program.contains(Block)]
7.8: removeProgramBlock


sd Drop Block
ProgramArea
Block
9: dropBlock()
9.1: setPosition
9.1.1: setPosition
9.2: dropBlock


sd Reset
BlockGame
ProgramArea
GameWorldType
8: resetEverything
8.1: resetProgramExecution
8.1.1: resetProgramExecution
8.2: GameWorld : createNewInstance
8.2.1: createNewInstance