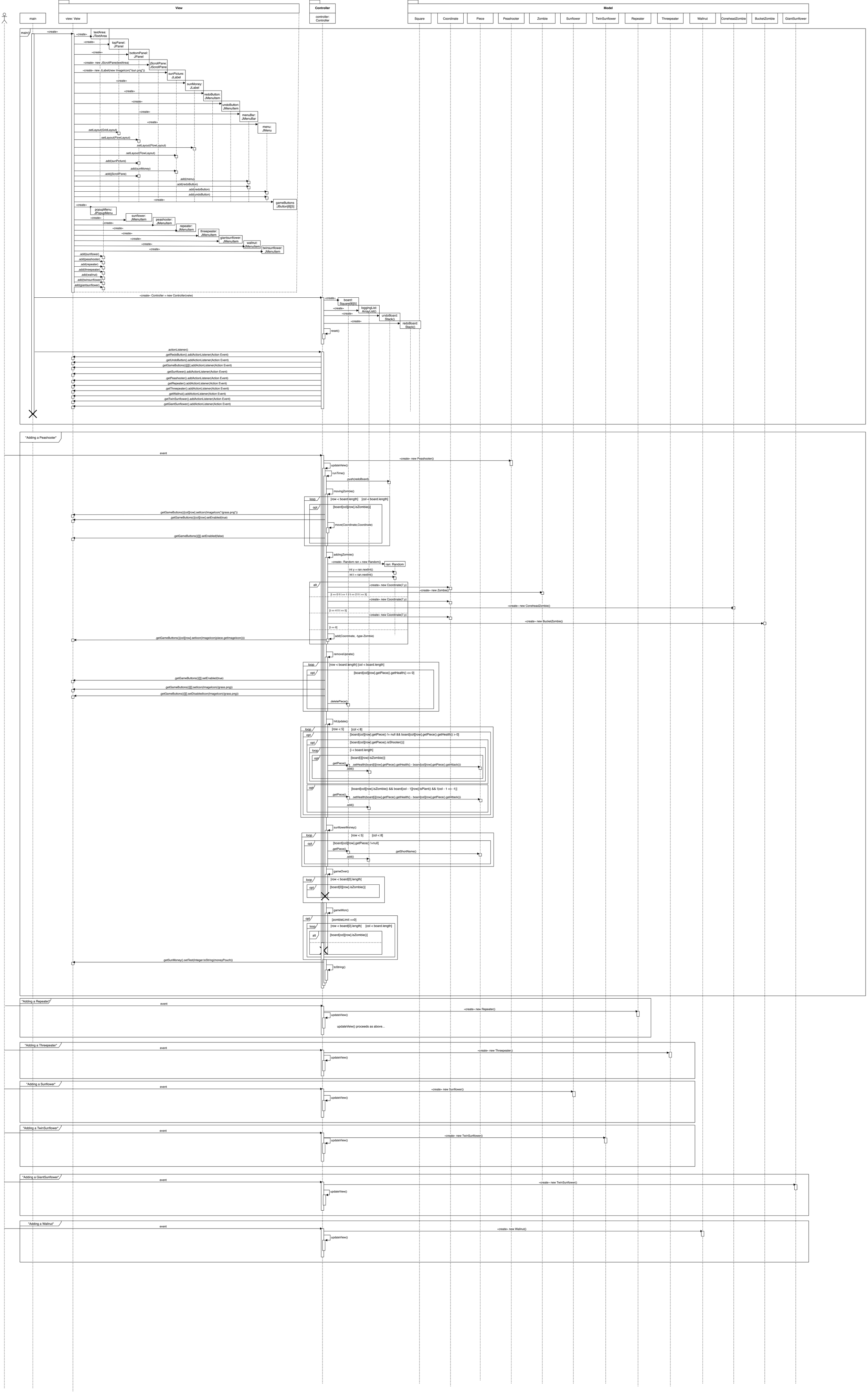
View
Controller
Model
main
view: Veiw
controller: Controller
Square
Coordinate
Piece
Peashooter
Zombie
Sunflower
TwinSunflower
Repeater
Threepeater
Wallnut
ConeheadZombie
BucketZombie
GiantSunflower
main()
«create»
textArea: JTextArea
topPanel: JPanel
bottomPanel: JPanel
«create» new JScrollPane(textArea)
jScrollPane: JScrollPane
«create» new JLabel(new ImageIcon("/sun.png"))
sunPicture: JLabel
sunMoney: JLabel
redoButton: JMenuItem
undoButton: JMenuItem
menuBar: JMenuBar
menu: JMenu
.setLayout(GridLayout)
.setLayout(FlowLayout)
.add(sunPicture)
.add(sunMoney)
.add(jScrollPane)
.add(menu)
.add(redoButton)
.add(undoButton)
gameButtons: JButton[8][5]
popupMenu: JPopupMenu
sunflower: JMenuItem
peashooter: JMenuItem
repeater: JMenuItem
threepeater: JMenuItem
giantsunflower: JMenuItem
wallnut: JMenuItem
twinsunflower: JMenuItem
.add(sunflower)
.add(peashooter)
.add(repeater)
.add(threepeater)
.add(wallnut)
.add(twinsunflower)
.add(giantsunflower)
«create» Controller = new Controller(veiw)
board: Square[8][5]
loggingList: ArrayList()
undoBoard: Stack()
redoBoard: Stack()
reset()
.actionListener()
.getRedoButton().addActionListener(Action Event)
.getUndoButton().addActionListener(Action Event)
.getGameButtons()[][].addActionListener(Action Event)
.getSunflower().addActionListener(Action Event)
.getPeashooter().addActionListener(Action Event)
.getRepeater().addActionListener(Action Event)
.getThreepeater().addActionListener(Action Event)
.getWallnut().addActionListener(Action Event)
.getTwinSunflower().addActionListener(Action Event)
.getGiantSunflower().addActionListener(Action Event)
"Adding a Peashooter"
event
«create» new Peashooter()
updateVeiw()
runTime()
.push(redoBoard)
movingZombie()
loop
[row < board.length] [col < board.length]
opt
[board[col][row].isZombie()]
.getGameButtons()[col][row].setIcon(ImageIcon("/grass.png"))
.getGameButtons()[col][row].setEnabled(true)
move(Coordinate,Coordinate)
.getGameButtons()[][].setEnabled(false)
addingZombie()
«create» Random ran = new Random()
ran: Random
int y = ran.nextInt()
int t = ran.nextInt()
alt
«create» new Coordinate(7,y)
«create» new Zombie()
[t == 0 || t == 1 || t == 2 || t == 3]
«create» new ConeheadZombie()
[t == 4 || t == 5]
«create» new BucketZombie()
[t == 6]
add(Coordinate, -type-Zombie)
.getGameButtons()[col][row].setIcon(ImageIcon(piece.getImageIcon()))
removeUpdate()
[row < board.length] [col < board.length]
[board[col][row].getPiece().getHealth() <= 0]
.getGameButtons()[][].setEnabled(true)
.getGameButtons()[][].setIcon(ImageIcon(/grass.png))
.getGameButtons()[][].setDisabledIcon(ImageIcon(/grass.png))
.deletePiece()
hitUpdate()
[row < 5] [col < 8]
[board[col][row].getPiece() != null && board[col][row].getPiece().getHealth() > 0]
[board[col][row].getPiece().isShooter())]
[i < board.length]
[board[i][row].isZombie()]
.getPiece()
.setHealth(board[i][row].getPiece().getHealth() - board[col][row].getPiece().getAttack())
.add()
[board[col][row].isZombie() && board[col - 1][row].isPlant() && !(col - 1 == -1)]
sunflowerMoney()
[board[col][row].getPiece() !=null]
.getShortName()
gameOver()
[board[0][row].isZombie()]
gameWon()
[zombieLimit ==0]
.getSunMoney().setTest(Integer.toString(moneyPouch))
toString()
"Adding a Repeater"
«create» new Repeater()
updateView()
updateVeiw() proceeds as above...
"Adding a Threepeater"
«create» new Threepeater()
"Adding a Sunflower"
«create» new Sunflower()
"Adding a TwinSunflower"
«create» new TwinSunflower()
"Adding a GiantSunflower"
«create» new TwinSunflower()
"Adding a Wallnut"
«create» new Wallnut()