

Setting First Ghost

At this point, there is one ghost randomly moving around the maze. Nothing happens if Pacman collides with it.

Run.py

```
import pygame
from pygame.locals import *
from constants import *
from pacman import Pacman
from nodes import NodeGroup
from pellets import PelletGroup
from ghosts import Ghost

class GameController(object):
    def __init__(self):
        pygame.init()
        self.screen = pygame.display.set_mode(SCREENSIZE, 0, 32)
        self.background = None
        self.clock = pygame.time.Clock()

    def setBackground(self):
        self.background = pygame.surface.Surface(SCREENSIZE).convert()
        self.background.fill(BLACK)

    def startGame(self):
        self.setBackground()
        self.nodes = NodeGroup("maze01.txt")
        self.nodes.setPortalPair((0,17), (27,17))
        self.pacman = Pacman(self.nodes.getStartTempNode())
        self.pellets = PelletGroup("maze01.txt.")
        self.ghost = Ghost(self.nodes.getStartTempNode())

    def update(self):
        dt = self.clock.tick(30) / 1000.0
        self.pacman.update(dt)
        self.ghost.update(dt)
        self.pellets.update(dt)
        self.checkEvents()
        self.checkPelletEvents()
        self.render()

    def checkEvents(self):
        for event in pygame.event.get():
            if event.type == QUIT:
                exit()
```

```

def checkPelletEvents(self):
    pellet = self.pacman.eatPellets(self.pellets.pelletList)
    if pellet:
        self.pellets.numEaten += 1
        self.pellets.pelletList.remove(pellet)

def render(self):
    self.screen.blit(self.background, (0,0))
    self.nodes.render(self.screen)
    self.pellets.render(self.screen)
    self.pacman.render(self.screen)
    self.ghost.render(self.screen)
    pygame.display.update()

if __name__ == "__main__":
    game = GameController()
    game.startGame()
    while True:
        game.update()

```

Ghosts.py

```

import pygame
from pygame.locals import *
from vector import Vector2
from constants import *
from entity import Entity

class Ghost(Entity):
    def __init__(self, node):
        Entity.__init__(self, node)
        self.name = GHOST
        self.points = 200

```

Constants.py

```

TILEWIDTH = 16
TILEHEIGHT = 16
NROWS = 36
NCOLS = 28
SCREENWIDTH = NCOLS*TILEWIDTH
SCREENHEIGHT = NROWS*TILEHEIGHT
SCREENSIZE = (SCREENWIDTH, SCREENHEIGHT)
BLACK = (0, 0, 0)

YELLOW = (255, 255, 0)

```

STOP = 0
UP = 1
DOWN = -1
LEFT = 2
RIGHT = -2

PACMAN = 0
PELLET = 1
POWERPELLET = 2
GHOST = 3

WHITE = (255, 255, 255)
RED = (255, 0, 0)

PORTAL = 3