1. Bugs


```
# WITH BUGS!
# This code contains at least 9 defects.
# Try to fix them all based on the error messages.

imprt pygame          1
from pygame import imagge, Rect    2

TILE_POSITIONS = [
    ('#', 0, 0),   # wall
    (' ', 0, 1)    3  # floor
    ('.', 2, 0),   # dot
    ____ 4
SIZE = 32

image = 'tiles.xpm'   5


def load_tiles()
    """
    Load tiles from an image file into a dictionary.
    Returns a tuple of (image, tile_dict)
    """
    tiles = {}
    tile_img = image.loaad('tiless.xpm')    6
    for x, y in TILEPOSITIONS:    7
        rect = Rect(x*SIZE, y*SIZE, SIZE, SIZE)
        tiles[symbol] = rect
    return tile_img, tiles


if __name__ == '__main__':
    tile_img, tiles = load_tiles()
    m = Surface((96, 32))    8
    m.blit(tile_img, get_tile_rect(0, 0), tiles['#'])
    m.blit(tile_img, get_tile_rect(1, 0), tiles[' '])
    m.blit(tile_img, get_tile_rect(2, 0), tiles['*'])    9   10
    image.save(m, 'tile_combo.png')


# ----------------------------

# Optional exercise:
# make the print statement below work
# by modifying the class
# so that it prints the char attribute


class Tile:

    def __init__(self, achar, x, y):
        char = achar    11
t = Tile('#', 0, 0)
print(t.char)
```

`Ln: 1   Col: 0`

1. `SyntaxError: invalid syntax` 修改 `imprt` 为 `import`

2. `ImportError: cannot import name 'imagge' from 'pygame'` 修改 imagge为image
3. `TypeError: 'tuple' object is not callable` & `SyntaxWarning: 'tuple' object is not callable; perhaps you missed a comma?` 修改：在元组中添加逗号
4. `SyntaxError: invalid syntax` 添加]
5. `AttributeError: 'str' object has no attribute 'load'` 删除 `image = 'tiles.xpm'`
6. `AttributeError: module 'pygame.image' has no attribute 'loaad'` 修改loaad为load

   `pygame.error: Couldn't open tiless.xpm` 修改文件名为tiles.xpm
7. `ValueError: too many values to unpack (expected 2)` 修改：for后添加symbol
8. `NameError: name 'Surface' is not defined` 修改：from pygame import加入Surface
9. `NameError: name 'get_tile_rect' is not defined` 修改 加入该函数定义
10. `KeyError: '*'` 修改：在元组中加入*的定义
11. `AttributeError: 'Tile' object has no attribute 'char'` 修改：char->self.char

2. 运行截图
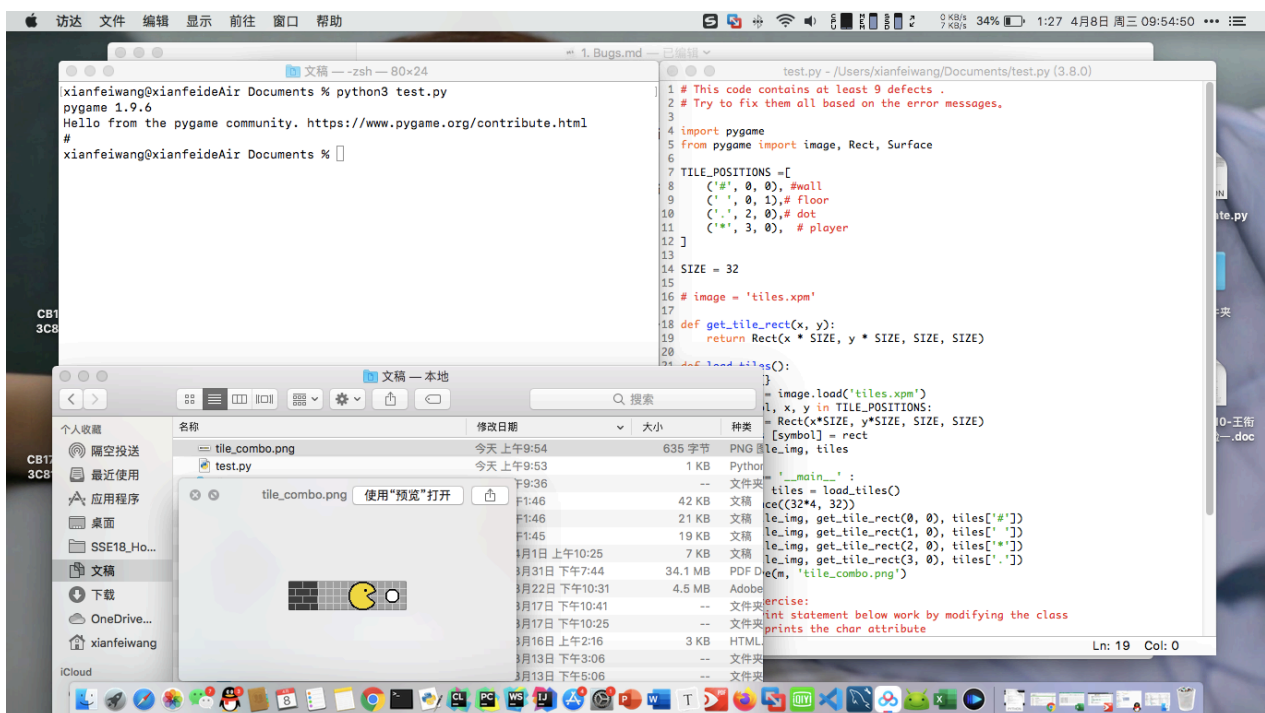
3. 代码

```
# This code contains at least 9 defects .
# Try to fix them all based on the error messages。

import pygame
from pygame import image, Rect, Surface

TILE_POSITIONS =[
    ('#', 0, 0), #wall
    (' ', 0, 1),# floor
    ('.', 2, 0),# dot
```

```python
        ('*', 3, 0),  # player
]

SIZE = 32

# image = 'tiles.xpm'

def get_tile_rect(x, y):
    return Rect(x * SIZE, y * SIZE, SIZE, SIZE)

def load_tiles():
    tiles = {}
    tile_img = image.load('tiles.xpm')
    for symbol, x, y in TILE_POSITIONS:
        rect = Rect(x*SIZE, y*SIZE, SIZE, SIZE)
        tiles [symbol] = rect
    return tile_img, tiles

if __name__ == '__main__' :
    tile_img, tiles = load_tiles()
    m = Surface((32*4, 32))
    m.blit(tile_img, get_tile_rect(0, 0), tiles['#'])
    m.blit(tile_img, get_tile_rect(1, 0), tiles[' '])
    m.blit(tile_img, get_tile_rect(2, 0), tiles['*'])
    m.blit(tile_img, get_tile_rect(3, 0), tiles['.'])
    image.save(m, 'tile_combo.png')

# Optional exercise:
# make the print statement below work by modifying the class
# so that it prints the char attribute

class Tile:
    def __init__ (self, achar, x, y):
        self.char = achar

t= Tile('#', 0, 0)
print(t.char)
```