

Task 1

```
def main():
    # Getting input string and making it into list & tuples
    # Exception handling does not make any sense in this case
    inp = input('Enter a string:')
    print(list(inp))
    print(tuple(inp))

if __name__ == '__main__':
    main()
```

Task 2

```
def main():
    inp = input('Enter numbers, tuples separated by ";":')
    try:
        inp = inp.split(';')
        inp = list(filter(lambda a: a!='', inp))

        inp = list(map(lambda a: a.split(','), inp))
    except:
        print('Invalid input!\nBetter luck next time')

    inp1 = list()
    for i in inp:
        inp1.append(tuple(map(lambda a: int(a), i)))
    print(inp1)

    inp1 = sorted(inp1, key = lambda a: a[1])
    print(inp1)

if __name__ == '__main__':
    main()
```

Task 3

```
# Getting input co-ordinates from the user
def getCoordinates(turn, tt):
    player = ''
    while True:
        if turn % 2 == 0:
            inp = input("Player 1, enter your move in r,c format:")
            player = 'X'
        else:
            inp = input("Player 2, enter your move in r,c format:")
            player = 'O'

        inp = inp.split(',')
        inp = list(map(lambda a: int(a), inp))
        r = inp[0]-1
        c = inp[1]-1
        if tt[r][c] != -1:
            print('INVALID MOVE, TRY AGAIN!')
        else:
```

```

        break
    inp.append(player)
    return inp

# Setting values
def setCoordinates(t, m):
    m[0] -= 1
    m[1] -= 1
    t[m[0]][m[1]] = m[2]
    return t

def print_horiz_line():
    return '---' * 3

def print_vert_line():
    return '|'

#function for printing the board
def gameBoard(tt):
    ret = ''
    for i in range(3):
        for j in range(3):
            if j == 0:
                ret += print_horiz_line()
                ret += '\n'
            ret += print_vert_line()
            if tt[i][j] != -1:
                ret += tt[i][j]
            else:
                ret += ' '
            ret += print_vert_line()
            ret += ' '
        ret += '\n'
    ret += print_horiz_line()
    return ret
    print_horiz_line()

def main():
    tic_tac = list()
    for i in range(3):
        t = []
        for j in range(3):
            t.append(-1)
        tic_tac.append(t)

    for i in range(9):
        g = getCoordinates(i, tic_tac)
        tic_tac = setCoordinates(tic_tac, g)
        print(gameBoard(tic_tac))

if __name__ == "__main__":
    main()

```