

AI GAME PROJECT

Implementation Guide

檔案說明

- AI_game.exe 主程式
- Sample1.exe 範例程式(預設組別為1)
- Sample2.exe 範例程式(預設組別為2)
- Sample.cpp/ Sample.py
- STcpClient.h/ STcpClient.py

Where to code – C++

- Write your AI in Sample.cpp function GetStep
- Change Sample.cpp to Team_yourTeamnumber.cpp

```
std::vector<int> GetStep(std::vector<std::vector<int>>& board, bool is_black) {  
    /*  
    Example:  
    std::vector<int> step;  
    step.resize(2);  
  
    step[0] = rand() % (7 + 1 - 0) + 0;  
    step[1] = rand() % (7 + 1 - 0) + 0;  
    return step;  
    */  
}
```

Where to code – Python

- Write your AI in Sample.py function GetStep
- Change Sample.py to Team_yourTeamnumber.py

```
def GetStep(board, is_black):  
    """  
    Example:  
    x = random.randint(0, 7)  
    y = random.randint(0, 7)  
    return (x,y)  
    """
```

How to execute

1. 打包你的程式成exe檔

- 在編譯之前請依使用語言修改以下檔案成自己組別

STcpClient.py

```
'''  
    *   請將 idTeam 改成組別   *  
'''  
idTeam = -1
```

STcpClient.h

```
/*  
    請將 idTeam 改成組別  
*/  
int idTeam = -1;
```

- 編譯成exe

How to execute

2. 執行AI_Game.exe
3. 輸入第一組組別編號
 - 號碼需與程式內組別號碼相同

STcpClient.py

```
'''  
    *   請將 idTeam 改成組別   *  
'''  
idTeam = -1
```

STcpClient.h

```
/*  
    請將 idTeam 改成組別  
*/  
int idTeam = -1;
```

4. 輸入第一組執行檔路徑
 - Example: D:\xxxx\xxxx\xxxx\Sample1.exe

How to execute

4. 輸入第二組組別編號
5. 輸入第二組執行檔路徑
 - Example: D:\xxxx\xxxx\xxxx\Sample2.exe

執行範例

```
D:\nctu_course_1082\大學部AI\AI_GameProject\AI_GameProject_2020\ForStudent>AI_game.exe
input Team1 teamnumber(int): 1
input Path to Team1exe(example: C:\yourpath\Team_number.exe): D:\nctu_course_1082\大學部AI\AI_GameProject\AI_GameProject_2020\exeFile\Sample1.exe
input Team2 teamnumber(int): 2
input Path to Team2exe(example: C:\yourpath\Team_number.exe): D:\nctu_course_1082\大學部AI\AI_GameProject\AI_GameProject_2020\exeFile\Sample2.exe
```

```
錯誤: 找不到處理程序 ""。
錯誤: 找不到處理程序 ""。
```

不影響程式執行，請直接忽略

```
round 1: black:[team 1] white:[team 2]
```

```
-----START GAME-----
```

```
it's player [black]'s turn
```

```
movement: (3, 1)
```

```
~ 0 1 2 3 4 5 6 7
```

```
0 - - - - - - -
```

```
1 - - - - - - -
```

```
2 - - - - - - -
```

```
3 - X - - - - -
```

```
4 - - - - - - -
```

```
5 - - - - - - -
```

```
6 - - - - - - -
```

```
7 - - - - - - -
```


繳交格式

- 需要繳交的有

1. 你的CODE: Team_yourTeamnumber.py & STcpClient.py (python) or Team_yourTeamnumber.cpp & STcpClient.h (C++)

2. 執行檔: Team_yourTeamnumber.exe

3. Report

- 注意: 請將所有的程式碼都寫在同一個檔案內 (Team_yourTeamnumber.py or Team_yourTeamnumber.cpp)

- Python 程式檔轉執行檔教學

<https://kknews.cc/zh-tw/tech/4ybyrv.html>