Computer Networks pRj2

Author: b05902127 劉俊緯, b05902117 陳柏文

Program & Protocol Design

- All command's format

```
{
    "opcode" : "char",
    "length" : "unsgined long long"
}
```

- Types of Opcode

opcode	details
s	**Sing up**: send usr/pwd to register an account.
l	**Login** : send usr/pwd to login.
m	**Messaging** : send a message.
r	**Refresh** : update message history.
u	**Upload File** : Upload a file.
d	**Download file** : Download a file
!	**Server message**

Sign up

Request

```
{
    "user_name" : "string",
    "password" : "string"
}
```

Response

```
{
    "status_code" : int,
    "state" : "string",
    "data" : []
}
```

Login

Request

```
{
    "user_name" : "string",
    "password" : "string"
}
```

Response

```
{
    "status_code" : int,
    "state" : "string",
    "data" :
    {
        "user_list":[
            ["id1","name1"],
            ["id2","name2"]
        ],
        "friend_list":{
            ["id1","name1"],
            ["id2","name2"]
        },
        "black_list":{
            ["id1","name1"],
            ["id2","name2"]
        }
    }
}
```

Message

Request

```
{
    "target" : "int",
    "type" : "message/data",
    "message" : "string"
}
```

Response

```
{
    "status_code" : int,
    "state" : "string",
    "data" : []
}
```

Refresh

Request

```
{
    "target" : "int",
    "start_from" : int,
    "end_to" : int,
}
```

Response

```
{
    "status_code" : int,
    "state" : "string",
    "data" : [
        line_number: {
            "type" : ""
            "message" : ""
        }
    ]
}
```

Upload File

Request

```
{
    "target" : "int",
    "filename" : "string",
    "data" : base64(file),
}
```

Response

```
{
    "status_code" : int,
    "state" : "string",
    "data" : []
}
```

Download File

Request

```
{
    "target" : "int",
    "filename" : "string",
    "FILEID" : "string",
}
```

Response

```
{
    "status_code" : int,
    "state" : "string",
    "data" : [base64(file)]
}
```

User & Operator Guide

How2Run?

Bonus

```
    "status_code" : int,
    "state" : "string",
```