Communication Protocol

This is a quick view of what are the different communications of client/server:

Login

Game

- **Actions**
    - **Action grab phase**
    - **Action run phase**
    - **Action shoot phase**
    - **Action use power up phase**

- **Power Ups**
    - **Targeting scope**
    - **Newton**
    - **Tagback granade**
    - **Teleporter**

- **Various communication messages**

Login

```
+--------+                        +--------+
| Client |                        | Server |
+--------+                        +--------+
|                                          |
|                                     ping |
|<-----------------------------------------|
|                                          |
| pong                                     |
|----------------------------------------->|
|                                          |
|                                    login |
|<-----------------------------------------|
|                                          |
|                        insert a nickname |
|<-----------------------------------------|
|                                          |
| nickname                                 |
|----------------------------------------->|
```

login request (server)
login\n
insert a nickname\n

login reply (client)
nickname\n

Game

Turn phase

```
+--------+                      +--------+
| Client |                      | Server |
+--------+                      +--------+
|                                        |
|                                 ping   |
|<---------------------------------------|
|                                        |
| pong                                   |
|--------------------------------------->|
|                                        |
|                                 wake   |
|<---------------------------------------|
|                                        |
| insert action                          |
|--------------------------------------->|--------------------|
|                                        |this section can be repeated|
|                              response  |    more than one time   |
|<---------------------------------------|--------------------|
|                                        |
| end turn                               |
|--------------------------------------->|
|                                        |
|                                sleep   |
|<---------------------------------------|
```
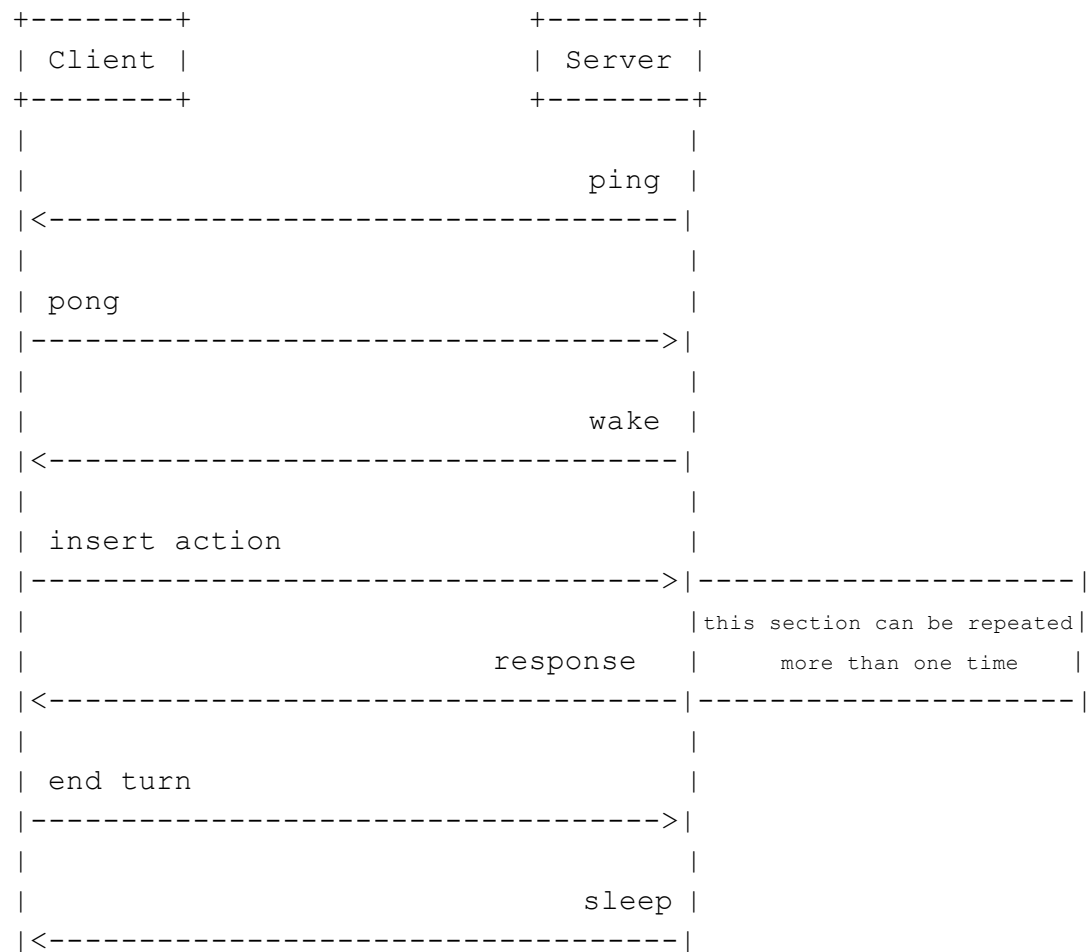
wake (server)
It's your turn\n

insert action (client)
insert action\n (grab,run,shoot,use power up)

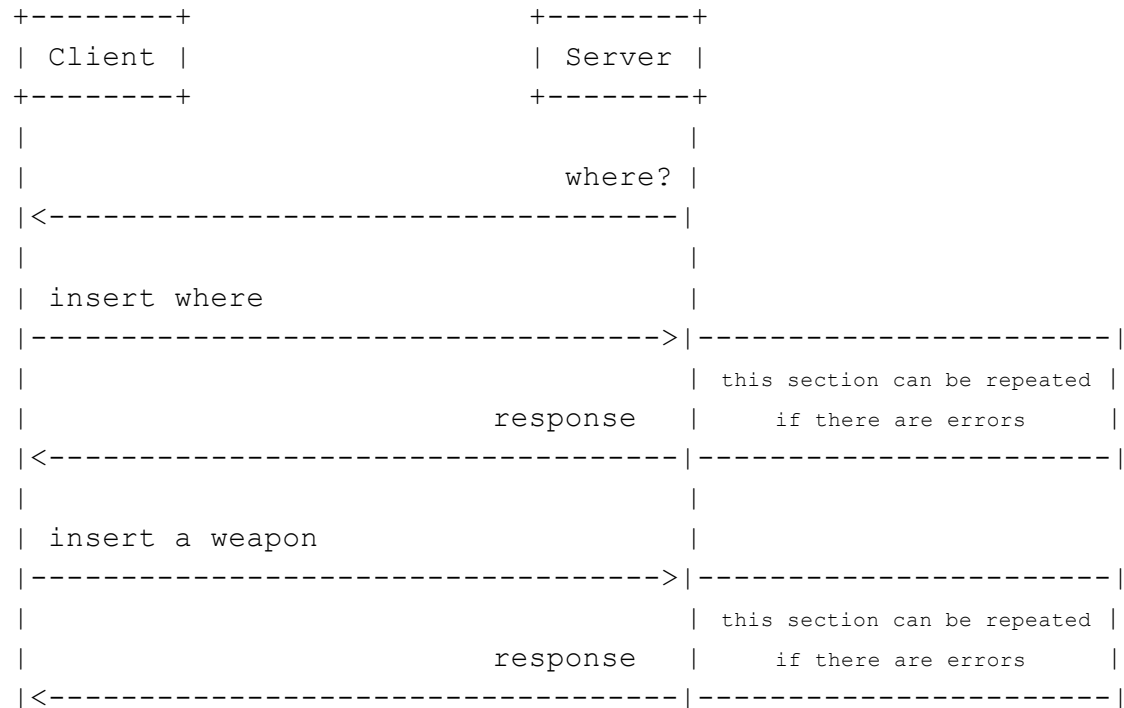**response (server)**
response\n (ok/error)

end turn (client)
end turn\n (declare the end of you turn)

sleep (server)
Your turn is over\n

Actions

Action grab phase

```
+-------+                    +-------+
| Client |                   | Server |
+-------+                    +-------+
|                                 |
|                         where? |
|<-------------------------------|
|                                 |
| insert where                    |
|------------------------------->|---------------------|
|                                | this section can be repeated |
|                       response |    if there are errors       |
|<------------------------------|---------------------|
|                                 |
| insert a weapon                 |
|------------------------------->|---------------------|
|                                | this section can be repeated |
|                       response |    if there are errors       |
|<------------------------------|---------------------|
```

where?(server)
where?\n

insert where(client)
insert where\n (as coordinates(x,y))

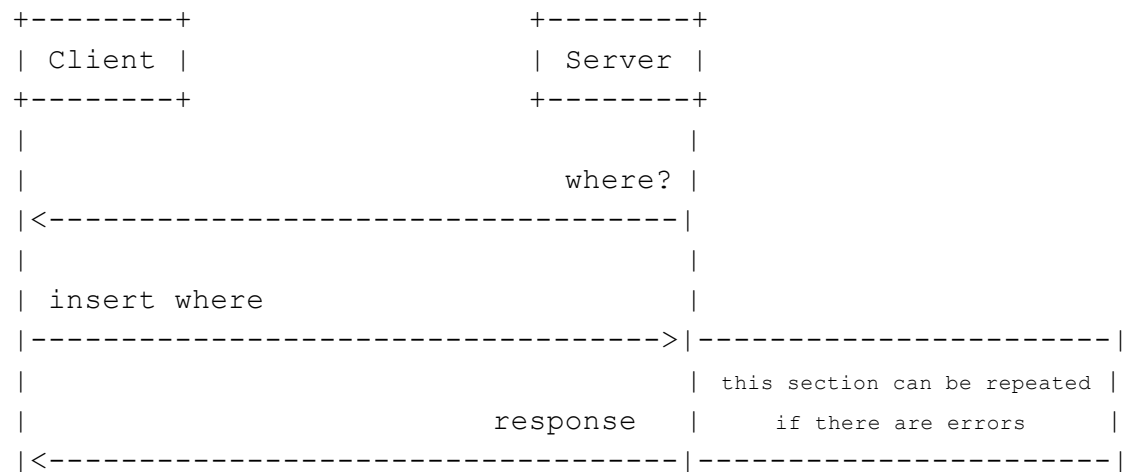**response (server)**
response\n (ok/error/choose a weapon)

insert a weapon(client)
insert a weapon\n

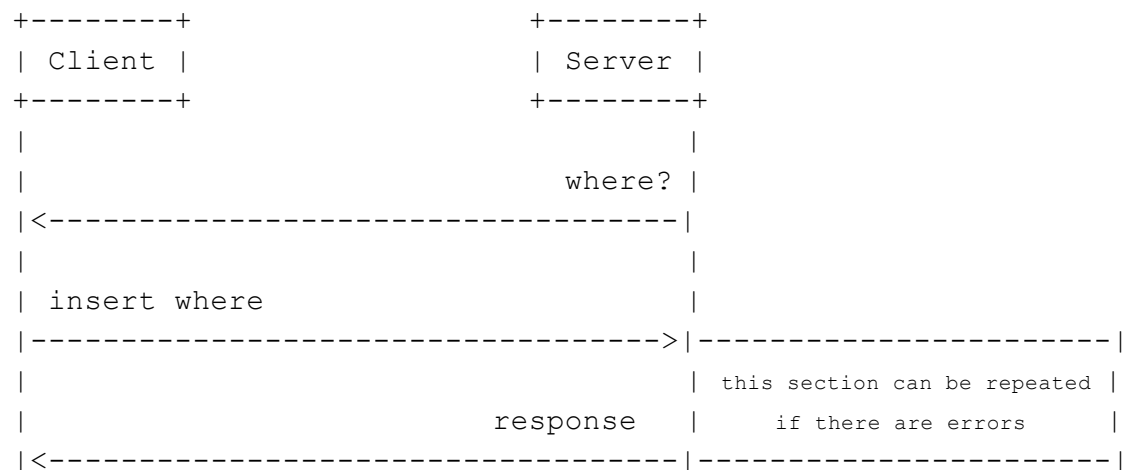**response (server)**
response\n (ok/error)

Action run phase

```
+-------+                    +-------+
| Client |                   | Server |
+-------+                    +-------+
|                                   |
|                            where? |
|<----------------------------------|
|                                   |
|  insert where                     |
|---------------------------------->|----------------------|
|                                   | this section can be repeated |
|                            response |    if there are errors       |
|<----------------------------------|----------------------|
```

where?(server)
where?\n

insert where(client)
insert where\n (as coordinates(x,y))

response (server)
response\n (ok/error)

Action shoot phase

```
+-------+                    +-------+
| Client |                   | Server |
+-------+                    +-------+
|                                   |
|                            where? |
|<----------------------------------|
|                                   |
|  insert where                     |
|---------------------------------->|----------------------|
|                                   | this section can be repeated |
|                            response |    if there are errors       |
|<----------------------------------|----------------------|
```
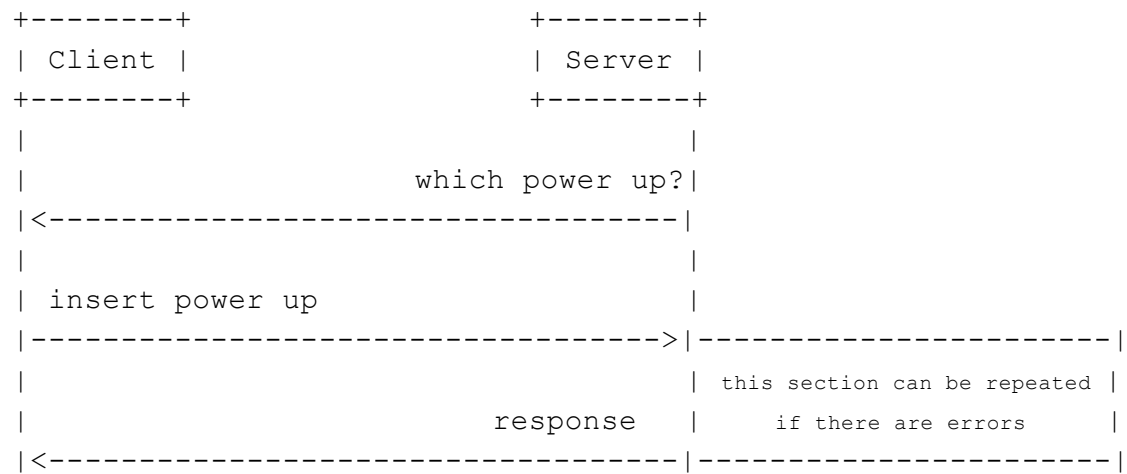
where?(server)
where?\n

insert where(client)
insert where\n (as coordinates(x,y) or color of room or player)

response (server)
response\n (ok/error)

Action use power up phase

```
+--------+                      +--------+
| Client |                      | Server |
+--------+                      +--------+
|                                    |
|                      which power up?|
|<-----------------------------------|
|                                    |
|  insert power up                   |
|----------------------------------->|----------------------|
|                                    | this section can be repeated |
|                      response      |    if there are errors       |
|<-----------------------------------|----------------------|
```

which power up?(server)
which power up?\n

insert power up(client)
insert power up\n (as power up name)

response (server)
response\n (ok/error)

Power Ups

Targeting scope

```
+-------+                    +-------+
| Client |                   | Server |
+-------+                    +-------+
|                                |
|                     who target?|
|<-------------------------------|
|                                |
| insert who                     |
|------------------------------->|----------------------|
|                                | this section can be repeated |
|                     response   |   if there are errors    |
|<-------------------------------|----------------------|
```

who target?(server)
who target?\n

insert who(client)
insert who\n (as enemy player)

response (server)
response\n (ok/error)

Newton

```
+-------+                    +-------+
| Client |                   | Server |
+-------+                    +-------+
|                                |
|                     who target?|
|<-------------------------------|
|                                |
| insert who                     |
|------------------------------->|----------------------|
|                                | this section can be repeated |
|                     response   |   if there are errors    |
|<-------------------------------|----------------------|
|                                |
|                          where?|
|<-------------------------------|
|                                |
| insert where                   |
|------------------------------->|----------------------|
|                                | this section can be repeated |
|                     response   |   if there are errors    |
|<-------------------------------|----------------------|
```

who target?(server)
who target?\n

insert who(client)
insert who\n (as enemy player)

response (server)
response\n (ok/error)

where?(server)
where?\n

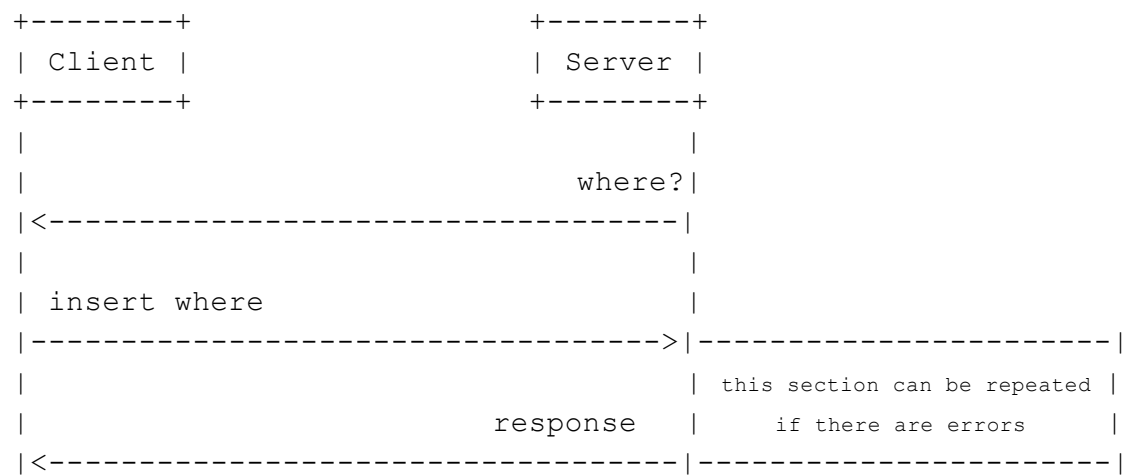**insert where(client)**
insert where\n (as coordinates(x,y))

response (server)
response\n (ok/error)

Tagback granade

```
+--------+                    +--------+
| Client |                    | Server |
+--------+                    +--------+
|                                   |
|                       who target?|
|<----------------------------------|
|                                   |
| insert who                        |
|---------------------------------->|-----------------------|
|                                   | this section can be repeated |
|                       response    |    if there are errors       |
|<----------------------------------|-----------------------|
```

Teleporter

```
+-------+                    +-------+
| Client |                    | Server |
+-------+                    +-------+
|                              |
|                        where?|
|<-----------------------------|
|                              |
| insert where                 |
|----------------------------->|----------------------|
|                              | this section can be repeated |
|                    response  |    if there are errors      |
|<-----------------------------|----------------------|
```
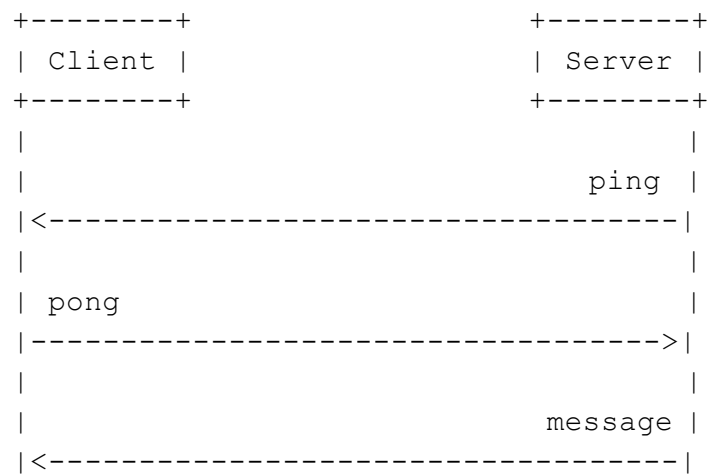
where?(server)
where?\n

insert where(client)
insert where\n (as coordinates(x,y))

response (server)
response\n (ok/error)

Various communication messages

Information message

```
+--------+                    +--------+
| Client |                    | Server |
+--------+                    +--------+
|                                      |
|                                 ping |
|<-------------------------------------|
|                                      |
| pong                                 |
|------------------------------------->|
|                                      |
|                              message |
|<-------------------------------------|
```

message(server)
message\n (such as movement of other player, how many points earned and so on..)