John Romero Programming Proverbs

- 8. “Write your code for this game only - not for a future game. You’re going to be writing new code later because you’ll be smarter.”

- John Romero, “The Early Days of Id Software - John Romero @ WeAreDevelopers Conference 2017”

Finishing implementation of health (server side)

- so far the Python bot can call the server and we always get the value 42!
- need to find the real value of the server side bot health
- the health is contained inside the structure `gentity_t` and can be accessed via the `g_entities` array

Finishing implementation of health (server side)

- **$HOME/Sandpit/ioquake-latest/ioquake3/code/game/ai_main.c**

```
void
call_trap_rpc (int client, int character)
{
  g_entities[client].info.health = g_entities[client].health;
  trap_CheckRPC(client, character, &g_entities[client].info);
}
```

- notice that `call_trap_rpc` copies the health value into an parameter area before calling `trap_CheckRPC`

New file

- **$HOME/Sandpit/ioquake-latest/ioquake3/code/botlib/pybotinfo.h**

```
#if !defined (PYBOTINFO_H)
#  define PYBOTINFO_H

typedef struct pybotinfo_s {
  int health;
  // you can obviously extend this struct to contain more useful data
} pybotinfo;

#endif
```

New file

- this is included from within `g_local.h`

- **`$HOME/Sandpit/ioquake-latest/ioquake3/code/game/g_local.h`**

```
#if !defined(G_LOCAL_H)
# define G_LOCAL_H
#include "../qcommon/q_shared.h"
#include "bg_public.h"
#include "g_public.h"
#include "../botlib/pybotinfo.h"

...
```

be_ai_char.c

- **$HOME/Sandpit/ioquake-latest/ioquake3/code/botlib/be_ai_char.c**

```
int dohealth (void *p)
{
  py_bot_t *py = (py_bot_t *)p;

  returnInt (p, py->info->health);
  return qtrue;
}
```

Obtaining a copy with health implemented server side

- you dont need to get this copy, but if you want the all health changes then this version has the complete changes applied

- ```
  $ ssh mcgreg.comp.glam.ac.uk
  <enter your linux password>
  $ cd $HOME/Sandpit
  $ wget http://floppsie.comp.glam.ac.uk/download/c/ioquake-20161114.tar.gz
  $ rm -rf ioquake-latest
  $ tar zxf ioquake-20161114.tar.gz
  $ exit
  # your command line is back on the client
  $ cd $HOME/Sandpit/ioquake-latest3/ioquake
  $ ./compilequake
  ```
  ```