**Ermac Voxel Game**

**“NEWGEN”**

**Game name: “Demolition Synergy”**



**Game Description:**

Game combines first person shooter, sandbox and voxel properties. It is uncomplete and in continuous development process.

**Source Repository:**

<https://github.com/ErmacMKIII/DemolitionSynergy>

**License:**

**GNU General Public License v3.0**

**Game assets structure (by entries):**

* **effects** – contains shaders (according to the OpenGL 3.3 and GLSL 3.3);
* **intrface** – loading images for interface such as crosshairs, fonts (F2IBuilder) and stuff for menus;
* **character** – models (.obj format) and textures (.png format) for the player assets;
* **sound** – contains music and sound fx audio files (.ogg format);
* **world** – contains models (.obj format) and textures (.png format) for blocks which make environment as it is.
* **weapons –** contains models for weapons (not used).

**All six entries are contained together as one archive which is dsynergy.zip.**

**Available commands:**

In order to type command which is equivalent to options setup press key “~”.

* **fps\_max**<num>, fpsMax<num>: allowing to change max fps (it must be positive number).
* resolution<width><height>, res<width><height>: allowing to change resolution (min resolution is 640x480 whilst max is your native resolution).
* **fullscreen** <bool>: makes your game run fullscreen/windowed.
* **v\_sync** <bool>, vsync<bool>: whether or not you wanna vsync on or off. If it’s on (you’ve set it to true) your fps is capped to your monitor refresh rate.
* **water\_effects** <enum>: NONE (disabled), LOW, MEDIUM, HIGH, ULTRA.
* **shadow\_effects** <enum>: NONE (disabled), LOW, MEDIUM, HIGH, ULTRA.
* **mouse\_sensitivity**<num>, msens <num>: sets mouse sensitivity to this value.
* **music** <num>, sound <num> : sets respectively music and **sound** volume to this value.
* **screenshot**: take a screenshot (uses folder screenshots).
* **position**: get/set position and (or) chunk.
* **sizeof**[<chunkId>]: get total size without args, if args provided size of blocks of that chunk.
* quit, exit : leaves the game.
* **cache**: displays info about cached chunks: <id><size><filename>
* **clear**:clears the console history.
* **game\_ticks** <ticks\_num>: change game time.
* **ping**: displays ping to server if player is non-host.

**HELP**

**Camera movements:**

W, UpArrow = Forward

A, DownArrow = Backward

S = Strafe Left

D = Strafe Right

LeftArrow = Turn Left

RightArrow = Turn Right

**Observer functions:**

PageUp = Ascend (Fly Up)

PageDown = Descend (Fly Down)

**Player functions:**

Space = Jump

Ctrl = Crouch/Sink

V = Change camera first person / 3rd person mode.

**Editor functions:**

N = Create New Block

M = Change Block Color

Mouse1 = Select Solid Block

Mouse1 + SHIFT = Select Fluid Block

Mouse2 = Place New Block

1-6 = Select Adjacent Solid Block

1-6 + SHIFT = Select Adjacent Fluid Block

F, 0 = Deselect

R = Remove Selected Block

[, ] = Change Texture For New Block

**Other functions:**

` = Enter Command

ESC = Main Menu

F1 = Help

F2 = Save Level

F3 = Load Level

F12 = Take Screenshot

P = Change Crosshair Color

**Notes:**

* Game uses LWJGL 3.2.3 since v 02 (BELARUS). V36G and later use LWGJL 3.3.3 (and later).
* Game requires Quad Core processor with support for at least 4 threads. Game implementation is multithreaded (at most time 3 threads will be active + 1 additional thread if random level generator is being used or when loading or saving level is in progress).
* Running the game requires OpenGL 3.3 (on graphic cards since March 2010) or later.
* Game is implemented using Java 11 (requires Java 11 or higher).
* Game Client and Game Server are using UDP protocol.

Author: Alexander “Ermac” Stojanovich (email: [coas91@rocketmail.com](mailto:coas91@rocketmail.com); Discord: ermac1844)

Audio material was provided from freesound.org by Erokia.