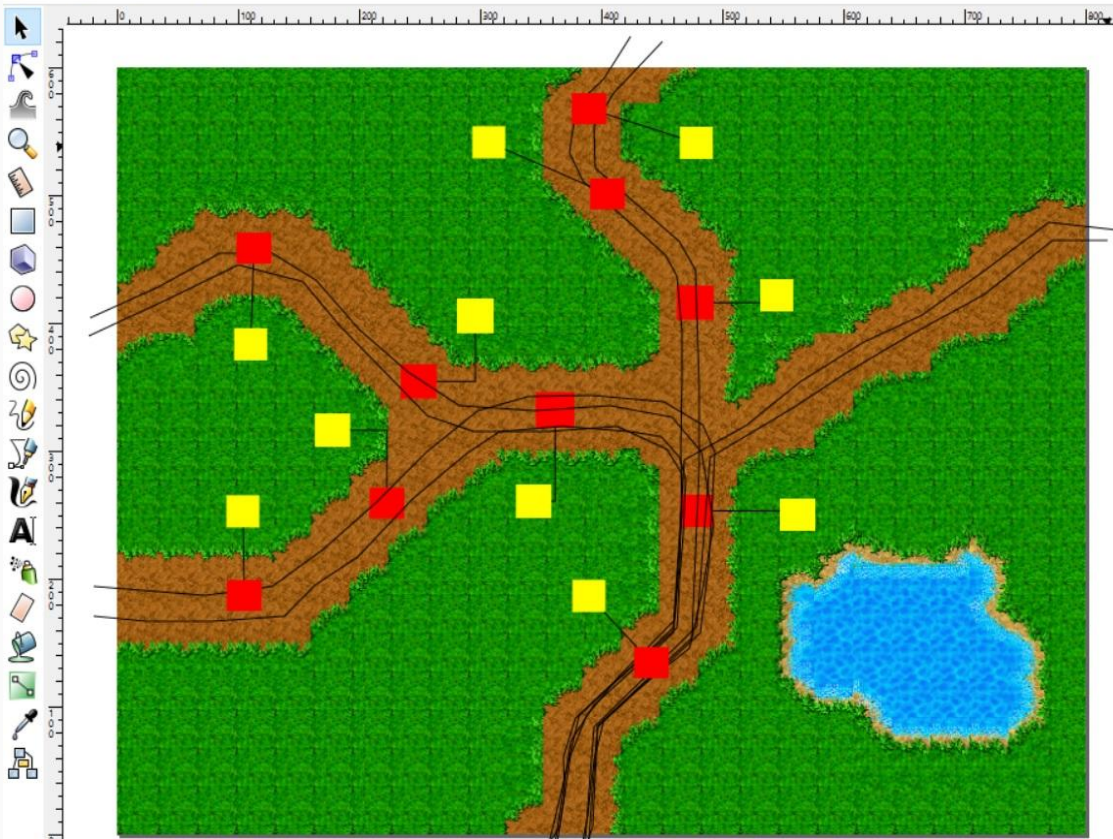# Tower Defense framework

About

- Create 2D tower defense framework:
  1. With open license to use for anyone
  2. Easy-to-use
  3. Pluggable mechanics
  4. Multiple platforms: Windows, Android

- Project is written in C#. Libraries used: MonoGame, MoonSharp, EmptyKeys

Major changes

- Visual effects
- Sound effects
- Friendly units are now supported
  - And fully scriptable
- Improvements in user interface
  - Special powers, better menu, simpler modifications and extensions
- Better scripting interface
  - Allowing more complex actions (temporary buffs, debuffs, actions with visual or sound fx)

New map format

```lua
------- [ SCRIPTING HEADER ] -------
------------------------------------
------------------------------------
local _table = require 'globals.lua';
-- Alias: contains table with addresses for (by default) - Engine variables,
local variables = _table.variables;
-- Alias: contains table with addresses for (by default) - Spells
local actions = _table.actions;
-- Alias: contains table with addresses for (by default) - Dynamic entities
local troops = _table.troops;
-- Alias: contains table with addresses for (by default) - Towers
local towers = _table.towers;
-- Alias: contains table with addresses for (by default) - SoundEffects
local sounds = _table.sounds;
-- Alias: contains table with addresses for (by default) - VisualEffects
local effects = _table.effects;
------------------------------------

------- [ /SCRIPTING HEADER ] -------
------------------------------------


dmgValue = 10;

function Execute()
    target.ApplyVisualEffectThis(effects.fxFireball, 5000);
    target.PlaySound(sounds.fireball, 1);
    target[variables.HP] = target[variables.HP] - dmgValue;
end;
```

```lua
        troop_tower_3 = 7003,
        arrow_tower_1 = 7004,
        arrow_tower_2 = 7005,
        arrow_tower_3 = 7006
    },

    sounds =
    {
        ------------------------------------------
        ------------ [ SOUNDEFFECT IDENTIFIERS ] ----------------
        ------------------------------------------
        -- NOTE: keys HAVE TO match identifiers from sounds.tas ---
        ------------------------------------------

        sword_slash = 8000,
        axe_slash = 8001,
        fireball = 8002,
        freeze = 8003,
        dying_friendly = 8004,
        dying_enemy = 8005
    },

    effects =
    {
        ------------------------------------------
        ------------ [ VISUALEFFECT IDENTIFIERS ] ---------------
        ------------------------------------------
        -- NOTE: keys HAVE TO match identifiers from effects.tas --
        ------------------------------------------


        fxHeal = 9000,
        fxFireball = 9001
    }
}
```

Better scripting options

TODO list

- Finish porting game to Android
- Upgrades together with appropriate UI screen
- Persistance

Demo