Dokidoki System

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# Introduction

Dokidoki aimed at being a AVG development tool based on unity3d. It could improve the efficiency to develop AVG games and also could implement the one-time-code-multiple-platform-run based on the features of unity3d.

# Related projects

## Kirikiri

## NScript

# System architecture

## System

System class is responsible for arranging every thing inside dokidoki system. It contains a world which has lots of characters and one player. These characters take behaviors to interact with each other to progress the game. Behavior is a kind of action. Action is the minimum unit of things that happens in the AVG game, such as the position changing of a character, a sentence the character spoke. Effect is another kind of action such as the start of playing a sound, the start of the video and so on.

## Script

Scripts class is responsible to recognize the script written by AVG game developer, and then compile it into action sequences for System to conduct.

### Example

Here give an example.

|  |
| --- |
| world     video src=video0; *//Play the video named video0*     bgm src=bgm0 mode=loop; *//Play the bgm named bgm0, in loop mode*     backgound src=background0 transition=instant; *//show the background named background0, in instant transition*     weather type=snow level=0.2; *//change the weather to snow, with level 0.2*     天空渐渐飘下了雪花。> *//The aside from the world*     在校门口隐约着有个人影。>     sound src=sound0; *//Play sound named sound0*     我慢慢的走过去。>  dokiChan     role type=character name="小雪"; *//the dokiChan character type is character(not player), named 小雪*     move position=center transition=instant; *//move dokiChan to center, in instant transition*     posture src=posture0; *//The appearance of dokiChan is posture0*     voice src=voice001 等你好久了。>>; *//dokiChan speak voice named voice001, with text 等你好久了。, and >> means dialog board change to next page*     voice src=voice002 一直在等着你。>>;     voice src=voice003 还以为你不来了呢。>>;  [我抬起头看着她的脸，向她走了过去(option011, sample1) | 我只是呆站着那儿，一动也不动的(option012, sample1)] *//Here means the option and the dokiScript name contains the option*  <option011> *//the option named option011, in sample1 file(this file)*  {   *//code in {} is locked, player could not do any operations suck as skip, save, load, config, click and so on* world     我微笑着走了过去。>>  player     role type=player;     face src=happyFace1;     voice 怎么会呢，我们不是约好了么。>>; *//Player leaves out the voice source*      }  dokiChan     move position=(0.45,0,0) transition=instant;        *//Here, (x=0.45, y=0, z=0) could be 0.45*     voice src=voice004 是呢，一年前的约定。>>;  player     voice 嗯，一年过去了。>>;  (sample2) *//Here means then the next dokiScript is sample2*      <option012> Player     这家伙还是一点没变，仿佛时间已经抛弃了她。>> *//Here means Psychological Descriptions, the player doesnt speak it out*  world     两个人仅仅呆站这那儿，无言的看着对方。>> *//The aside from the world*     weather type=sunny; *//The weather changes to sunny*     不经意间，雪停了>>  (sample3) |

### Grammar

Here is the grammar explanation.

|  |
| --- |
| dokidoki[Doki]:  Doki → Part { Part }  Part → Block | Flag | Option | Lock | Jump  Flag → ‘[’ Text ‘(’ Identifier, Identifier ‘)’ { ‘|’ Text ‘(’ Identifier, Identifier ‘)’ } ‘]’  //{} means repeat many times or not, ‘{’ and ‘}’ just means the symbol itself  Option → ‘<’ Identifier ‘>’  Lock → ‘{’ Block { M Block } ‘}’  Jump → ‘(’ Identifier ‘)’  Block → Identifier Action { Action } | WORLD Action { Action }  Action → Tag { Key = Value } ( Text TextEnd ) ; | Text TextEnd  Tag → BACKGROUND | WEATHER | SOUND | BGM | VIDEO | MOVE | POSTURE | VOICE | ROLE  Key → SRC | TRANSITION | TYPE | LEVEL | MODE | POSITION | NAME  Value → Identifier | Constant | ‘(‘ Constant, Constant, Constant ‘)’ | “ Text ” | INSTANT | GRADUAL | SUNNY | RAIN | SNOW | LOOP | CENTER | LEFT | RIGHT | PLAYER | CHARACTER  TextEnd → > | >>  //words in upper letters are const string itself |

|  |  |  |
| --- | --- | --- |
|  | Example | Description |
| Doki |  | Mostly, one script file |
| Flag | [我抬起头看着她的脸，向她走了过去(option011, sample1) | 我只是呆站着那儿，一动也不动的(option012, sample1)] | Flag with options to choose |
| Option | <option011> | Option that Flags should jump here when this option is chosen |
| Lock | { xxx } | For some performance, disable players’ operations |
| Block | world  video src=video0;  bgm src=bgm0 mode=loop;  backgound src=background0 transition=instant;  weather type=snow level=0.2;  天空渐渐飘下了雪花。>  在校门口隐约着有个人影。>  sound src=sound0;  我慢慢的走过去。> | One block of script code, start with one focused Object, maybe world or characterId (here means those lines code would focus on the world) |
| M |  | Nothing, only for compile works |
| Action | bgm src=bgm0 mode=loop | Action, focused on current |
| TextEnd |  | After words symbol, means to click to next words or, click to change dialog with next words |
| Tag | bgm | Action tags |
| Key=Value | src=bgm0 mode=loop | Parameters for current action |
| Key | src | Attributes key |
| Value | bgm0 | Attributes value |
| Identifier | dokiChan, player, bgm0, backgroud0, sample1, option011 |  |
| Constant | 0, 0.2, 0.5, 1.0 |  |
| Text | 天空渐渐飘下了雪花。 |  |