The Dyog Language

Introduction: The Dyog (Design Your Own Game) programming language is designed to implement limited animation, role-playing games. This language gives the programmer a simple approach to create his or her own unique gaming experience. Many of the mainstream gaming companies have sophisticated graphics tools, machines and a large team of developers to implement their software but many consumers feel they lack originality and imagination. Dyog allows a one person programming team, which has the vision and imagination to create a game but lacks the tools, to design an unadorned but very exciting role-playing experience.

Dyog: Is a simple role-playing game design language, which offers programmers an avenue to design:

1.) Game backgrounds
2.) Character actions and interactions
3.) A customized cast of characters
4.) Interactive game play
5.) A "Tree" storyline

Game Backgrounds: Dyog comes with standard libraries of backgrounds that model various environments. A wide assortment of outdoor and indoor environments is available within the libraries. Dyog also allows the programmer to design his or her own background by beginning with one of the standard backgrounds and adding attributes to

it. This language also comes equipped with standard background attribute libraries that consist of standard objects that would commonly be found in the corresponding environments.

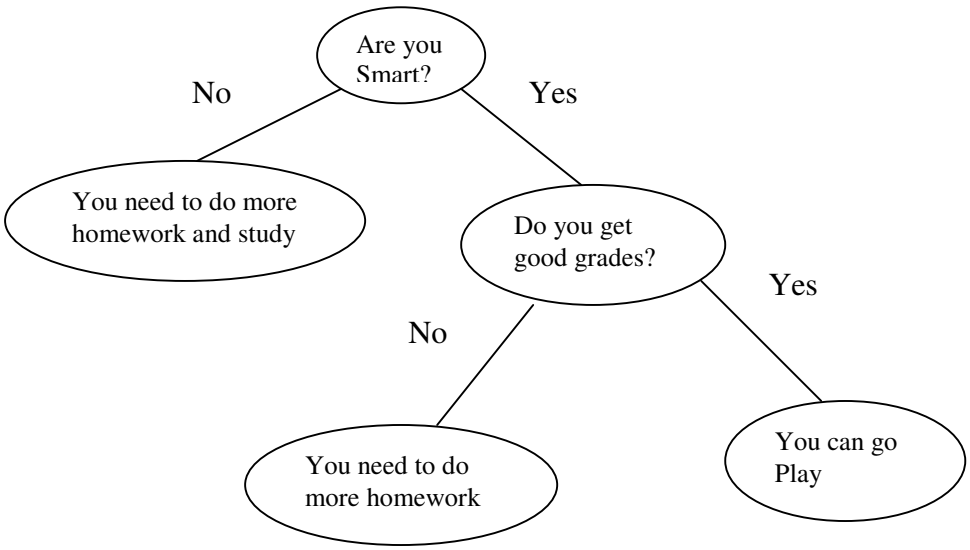
Character actions & interactions: Dyog allows character actions to be denoted by speech bubbles, and action captions. The animation allowed by Dyog is limited and similar to that of a comic book. Bubbles over the characters head denote speech. Character actions are denoted by captions on the screen. All of which are fully customizable by the programmer.

Cast of Characters: The Programmer has the ability to customize his or her cast of characters through Dyog's standard libraries. These libraries contain a wide variety of characters to choose from. Programmer also have the option of using their own characters outside of the standard Dyog library as long as they are in a ".gif" format. Using a character in Dyog is as easy as declaring a character variable and setting its position on the screen.

Interactive Game Play: Dyog has the ability to create a very interactive experience for the user. A Dyog video game performs all of its user interaction by requesting the user to make decisions and thus progressing the game play based on those decisions. Dyog makes it easy for the programmer to create a list of decisions for the user to choose from in a certain situation. Where the game takes the user next will depend on his or her last decision. The more often the user is prompted to make a decision the more intricate the

gaming experience becomes. It is standard for the programmer to prompt the user for input at every screen but variations of this can also be implemented (Screens will be defined in a later paragraph).

"Tree" Storyline: The notion of a tree storyline is that the user will always start the game at the same screen and be put through the same initial scenario. At that first screen the user will be prompted a menu of decisions and where the game takes him or her next will depend on that decision. This happens again and again throughout the game depending on how the programmer structures the game. Thus the user can play the game multiple times and get a different experience each time. The term "Tree" comes from the decision tree that is made when analyzing the architecture of the game play. Each decision is a node and each choice is a vertex that leads to another node or decision. The tree below denotes a simple program structure.



To make games easy for the programmer to develop Dyog uses a screen structure. A screen can consist of a background, background attributes, and characters. At least one screen must be designed. This screen will be the first environment that is displayed to the user. At that initial screen the programmer will prompt the user for some input pertaining to whatever scenario the user is placed in. Once the user makes a choice the game will take the user to the next screen/scenario depending on the choice made.

Dyog makes the process of designing a role-playing game easy and straightforward. A Dyog game does not appear to be as graphically complex as video games on the market today, but has the potential to produce a very elaborate and interactive gaming experience.

Sample Code:

```
screen init_screen{
   setbkgd(street.gif);            //sets the backround to be a street setting
   bkgdadd(lamp.gif, 15, 47);          //adds a street lamp at the coordinates x=15, y=47
   characteradd(police.gif, 30,0);      //adds a police officer at coordinates x=30, y=0
   characteradd(thief.gif, 100,0);      //adds a thief at coordinates x=100, y=0
   decisions.clear;                     //clears the set of decisions from the last scenario
   decisions.add("Surrender",1);        //choice number '1' is for the thief to surrender
   decisions.add("Run",2);              //choice number '2' is for the thief to run
   decisions.add("Shoot at police officer",3);          /*choice number 3 is for the thief to
                                                        shoot at the officer*/
   display;      //display the screen to the user
   input;                               //Prompt for user input
   return;       //Return to the main program so that it can send us to the next screen
}
```

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