

Lesson 2: Programming with Alice

WHOLENESS OF THE LECTURE

The Alice programming environment provides an enjoyable introduction to computer programming using objects. Characters, vehicles, and buildings are objects in a virtual world. We can active the behaviors of these objects by calling the methods of the objects, and we can create new behaviors.

MAIN POINTS

1. Alice is a tool to learn the principles of programming while also creating 3D animations and games. Alice makes it easy to learn the important concepts of programming and to see the results of your programming. The practice of the TM technique is easy and the benefits of regular meditation appear naturally in our life.
2. Alice and Java use the object-oriented programming approach. In Alice, the stage is a "virtual world", and the characters are 3D models of things, called objects. All objects in the virtual world have position, orientation and color, which are properties of the object.
3. We can get an object to do something by calling an object's method. Alice objects have some built-in methods. We can write a new method for an object to define a new behavior.
4. Using Alice to write computer programs is similar to a movie writer composing a script for a movie -- prepare a plan or a "storyboard" before starting to write. A description of a scene guides the developer in the implementation. "Well begun is half-done."
5. A composite object is composed from other objects. Telling an object to do something, translates into the object telling its parts to implement the action.