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ANGRY BIRDS

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ABSTRACT

In this project, we focus on developing a vision module for agents playing the Angry Birds computer game. To achieve this, a range of common methods in image processing and computer vision was employed.The result is a fast, reliable vision module which outputs accurate descriptions for most of the known objects. The game features a single level, parallax backgrounds, animations, pinch to zoom ability.

1.INTRODUCTION

Angry Birds is a popular single-player video game. The primary goal of the game is to destroy all pigs in the scene by launching a sequence of given birds from the slingshot. The given birds may have different types, with special abilities that can be activated by tapping after the launch. A level is completed if all pigs are destroyed and the player is awarded a score based on the number of birds used and number of objects destroyed. The Angry Birds project focuses on developing an artificial agent which plays the game. Several areas including computer vision, knowledge representation and reasoning, planning is involved in developing this game. Angry Birds follows the story that the survival of Angry Birds is at stake as the Piggies have stolen their eggs and the Birds now have to destroy the greedy pig‘s defences.

The purpose of this Angry Birds game is to develop a single window gaming environment that destroy all pigs in the scene by launching a sequence of given birds from the slingshot. This project focuses on developing a vision module which does this, by combining several common techniques in image processing and computer vision. The working procedures are well suited as they allow for encapsulating external sources of information: on the one hand, numeric computations and part of the spatial processing tasks are computed on what can be called ―The Physics Side‖ and can be embedded as external sources.

1.2 SCOPE

The scope of the Angry Birds Game is as follows:

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Towards modelling dynamic (situation-dependent) and static knowledge in a physics-based game. High quality output. Cost competitiveness, simply because of use of AI. Effective turn- around-time. Provision for creating and managing folder hierarchy for managing clients

2.LITERATURE REVIEW

EXISTING SYSTEM

The current system contains the basic programming language properties and the core Angry birds game was written in C++ (Box2D). After the game development progressed, to simplify the creation and management of huge data and scripts related to map levels, difficulty, and all of that other ―stuff‖ that you have to do when making a real video game, they automated everything by using 'Lua'.

Information retrieval of the scores is a very big process. Lack of organization of the files may porn to information loss due to accidental deletion of files. No security because the codes are visible to the users. Report generation will be a big task.

PROPOSED SYSTEM

The proposed system is one which is an Angry Birds Game Using Python, which is a single-player video game and is very feasible to customers by being accessible to them through AI. To recreate one of the most popular Android or IOS Game, the proposed system Angry Birds in Python using PyGame. A wide range of ground graphic techniques can be implemented in PyGame where the parallax background is very attractive to the visioners and players. As Python offers excellent readability and simple-to-learn syntax in gaming environment, a fast and reliable output of "Angry Birds" game will be produced.

To recreate one of the most popular Android or IOS Game, the proposed system Angry Birds in Python using PyGame. A wide range of ground graphic techniques can be implemented in PyGame where the parallax background is very attractive to the visioners and players. As Python offers excellent readability and simple-to-learn syntax in gaming environment, a fast and reliable output of "Angry Birds" game will be produced. It is possible to deal with the respective limitations of both declarative modeling and traditional programming and gain instead from respective benefits; indeed, on the one hand, logic programming is extremely handy and performance efficient when dealing with discrete domains, but it has limited ability to cope with nearly continuous domains, and at the price of unacceptable performance.

3.SYSTEM REQUIREMENTS

System Specifications is a freeware system information utility that produces specifications of your system‘s Software and Hardware. With System Specifications we can see, save and print a complete specification of PC. This standalone, system information utility can also perform various windows functions. Additional advanced info includes CPU, drives, applications, display, memory, networking, internet, CD / DVD drives and more.

SOFTWARE REQUIREMEMENTS

Software Requirements deal with defining software resource requirements and

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prerequisites that need to be installed on a computer to provide optimal functioning of an application. These requirements or prerequisites are generally not included in software installation package and need to be installed separately before the software is installed.

• HTML : Page layout has been designed in HTML.

• CSS : CSS has been used for all the designing part.

• Python : All the business logic has been implemented in Python.

• JSP : All the front end logic has been implemented in Python.

• MYSQL : MYSQL database has been used as database for the project.

• Django : Project has been developed over the Django Framework.

• JavaScript : All the validation task and animations has been developed by JavaScript.

HARDWARE REQUIREMENTS

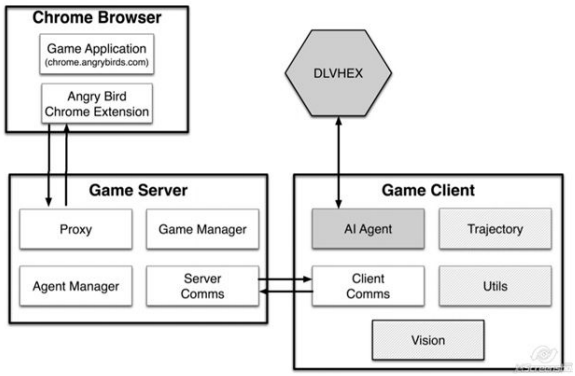
The most common set of requirements defined by any operating system or software application is the physical computer resources, also known as hardware, A hardware requirements list is often accompanied by a hardware compatibility list(HCL), especially in case of operating systems.

Hard Disk : 80GB

RAM : 2 GB Minimum & Above Processor : Intel Pentium-IV and above Mouse : Optical Mouse

4.ARCHITECTURE

System Architecture is abstract, conceptualization-oriented, global, and focused to achieve the mission and life cycle concepts of the system. It also focuses on high-level structure in systems and system elements. It addresses the architectural principles, concepts, properties, and characteristics of the system-of-interest. It may also be applied to more than one system, in some cases forming the common structure, pattern, and set of requirements for classes or families of similar or related systems.



5.WORKING

CLASS DIAGRAM- Class diagrams describe the structure of the system in terms of classes and objects. A class diagram is a type of static structure diagram that describes the structure of the system by showing the system‘s classes, their attributes, operations, and their relationships among objects. In the diagram, classes are represented as boxes that contain three compartments: The top compartment contains the name of the class. It is printed in bold and centered, and the first letter is capitalized. The middle compartment contains the attribute of class and is left aligned. The bottom compartment contains

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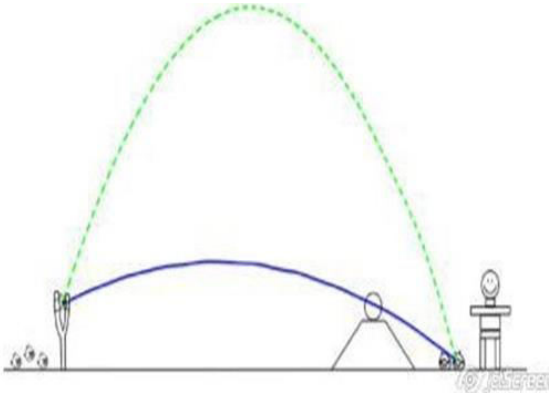
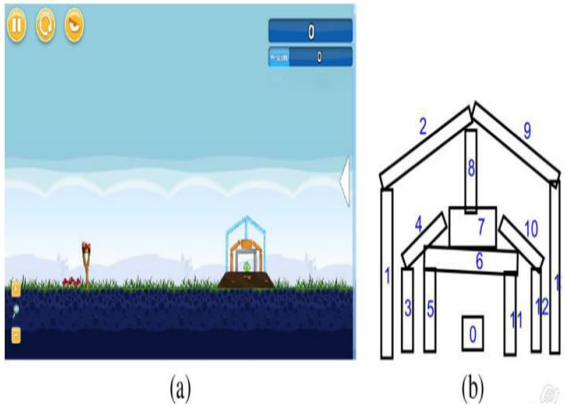
the operations the class can execute. They are also left aligned.

A problem with software testing is that the number of defects in a software product can be very large, and the number of configurations of the product larger still. Bugs that occur infrequently are difficult to find in testing. A rule of thumb is that a system that is expected to function without faults for a certain length of time must have already been tested for at least that length of time. This has severe consequences for projects to write long-lived reliable softwareAn Association represents a family of links. A binary association is normally represented as a Line.

PHYSICS LAW'S AND PROECTILE (TRAJECTORY) MOTION



2-D AND 3-D DIFFRENCES



(a) (b)

6.CONCLUSION

The Angry Birds Game using Python is a web-based application for providing players and viewer‘s an artistic Parallax backgrounds, animations, pinch to zoom ability. This application software has been computed successfully and was also tested successfully by taking ―test cases‖. It is user friendly, and has required options, which can be utilized by the user to perform the desired operations. The software is developed using Java Script as front end, Python as a programming language and MySQL as back end in Windows environment.

The Angry Birds Game, and hence the study, design, and implementation of this work, let to several challenges in knowledge representation, reasoning, and artificial intelligence in general. As for the original goal of Angry Birds, even though according to the benchmarks and the results of the competitions this approach seems quite effective and general, further identified several aspects in which Angry Birds Game can be improved. After a player‘s shot, the scenario evolves complying with laws of physics, with the crash of object structures and a generally complex interaction of subsequent falls. A more accurate study of the interaction between objects and a more detailed implementation of the different shapes of the objects are also under consideration.

7.ACKNOWLEDGEMENT

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