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1800L

MSD-4.2A
Programming for Computer Games

TASK 1

A) Godot Engine
   1) This engine is able to handle a large variety of programming languages such as, but not limited to; C#, C++, D, Rust, Nim & basically any language with GDNative bindings.
   2) An example of this engine would 'Deponia', which came out in early 2012.
   3) This Engine can create both 2D & 3D.

B) Solar2D
   1) This engine is based with Lua layered on top of OpenGL/C++.
   2) An example of this at work is 'Designer City', a city building game.
   3) Solar2D, as is pointed out in the name itself, is a 2D Engine.

C) Phaser
   1) Games that run on this engine are developed with either TypeScript or JavaScript
   2) A Game that utilizes Phaser is 'Fireboy and Watergirl 5: Elements'.
   3) Phaser is a 2D Engine.

D) jMonkey
   1) Content of this engine are written primarily in Java.
   2) There is a large variety of games made with this engine, one of which is 'NitronFPS'
   3) This Engine is 3D.

E) Panda3D
   1) The programming languages used for this engine are C++, C & Python.
   2) 'Toontown Online' is a good example of this engine at work,
   3) As mentioned in its name, this is a 3D Engine.

TASK 2

A)

1) JPG - Standing for “Joint Photographic Group”, JPG is the most commonly used compressed image format out there. It has a compression ratio of up to 10:1, making it quite a small sized file amongst image formats, on most occasions, depending on resolution of course. Unfortunately, it comes with lossy compression, but makes up for it in terms of file size.

2) PNG - Standing for “Portable Graphics Format”, PNG is the most commonly used uncompressed raster image format. It can be compressed and supports lossless data compression, meaning quality and detail isnt lost the more it is compressed. PNG also supports transparency & full-colour RGB or RGBA images but does not support CMYK.

3) GIF - Standing for “Graphics Interchange Format”, GIF is a bitmap image format and is very widely used across the internet and other platforms, being well known for its large compatibility amongst devices and applications. It is the commonly seen “moving images” on the internet. This also supports lossless compression and uses the 24-bit RGB colour space, giving each image up to 256 colours to choose from.

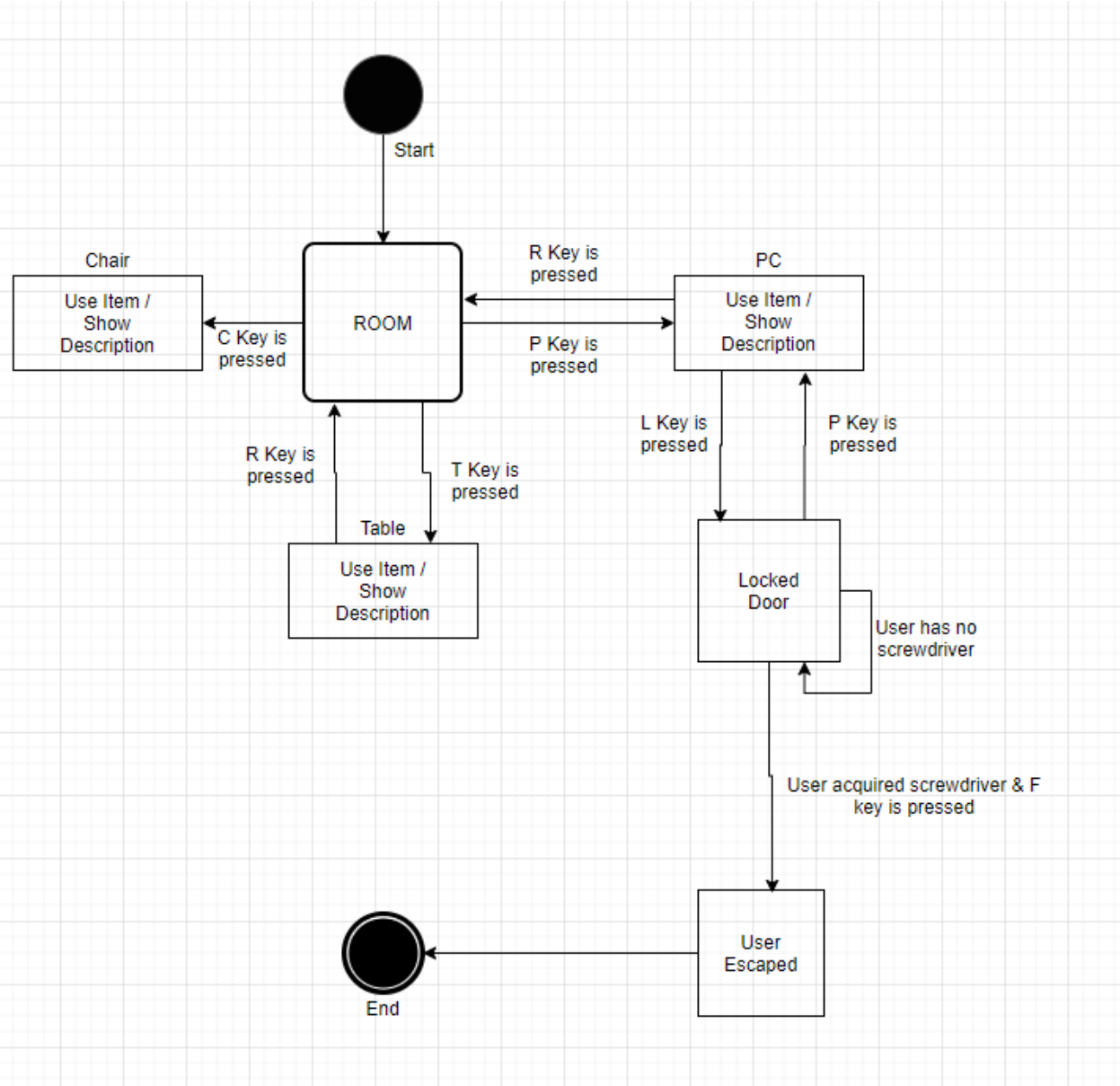
B)

1) MP3 - Standing for “MPEG-1 Audio Layer III or MPEG-2 Audio Layer III”, is a vastly recognized coding format for digital audio. Unfortunately, MP3 uses lossy data compression to counter file size compared to uncompressed audio. Small size and more or less acceptable fidelity led to an explosion in the distribution of music over the Internet in the mid- to late-1990s, and here it is today still being used everywhere.

2) WAV - Standing for “Windows Wave” or “Windows Audio Waveform”, WAV was developed by Microsoft and IBM, specifically for storing audio on PC’s.

TASK 3

TASK 4


Start
Chair
Use Item / Show Description
C Key is pressed
ROOM
R Key is pressed
P Key is pressed
PC
Use Item / Show Description
R Key is pressed
T Key is pressed
Table
Use Item / Show Description
L Key is pressed
P Key is pressed
Locked Door
User has no screwdriver
User acquired screwdriver & F key is pressed
User Escaped
End