

# Computació Gràfica i Multimèdia

Màster en Enginyeria Informàtica

Curs 2022/23

## Project description

This year we will develop a project devoted to the creation of a "Pacman"-type videogame.

The graphics part of the project is composed of four work packages. This document describes the third one.

## Work plan for the third work package

The third work package is composed of the following tasks:

- Inclusion of 3D graphics to the game
- Inclusion of texture mapping

## Task 1. Inclusion of 3D graphics to the game

Some details are given next:

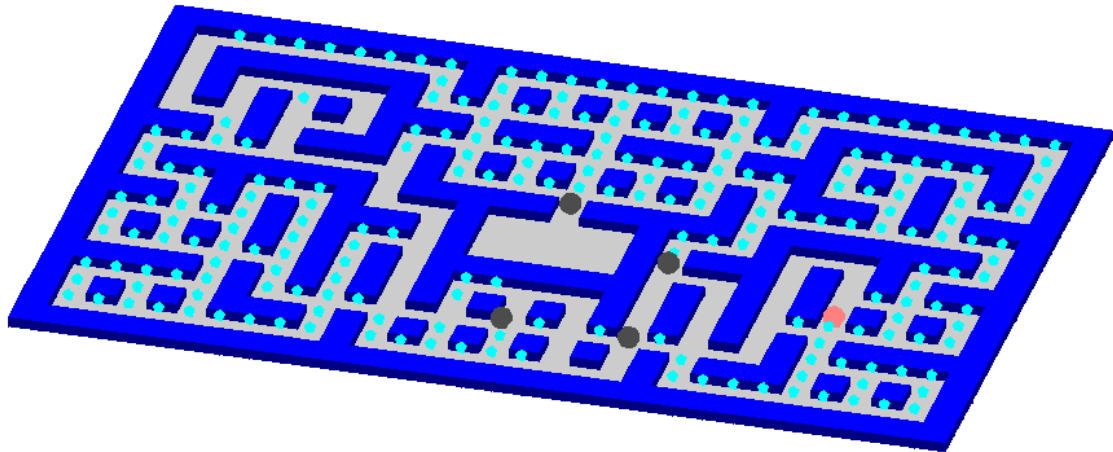
- It has to be possible to interactively modify the observer position employing the keyboard. The user has to be able to position the viewer at any point around the scene (even below it).
- Set polygon drawing mode so that it only fills the polygons that are facing towards the observer. This will help you to identify polygons that are not properly orientated. This can be done through the following procedure calls:

```
glPolygonMode(GL_FRONT, GL_FILL);
```

```
glPolygonMode(GL_BACK, GL_LINE);
```

- You can represent the game characters as a sphere. The procedure `gluSphere` can be useful to you.

An example is next shown.

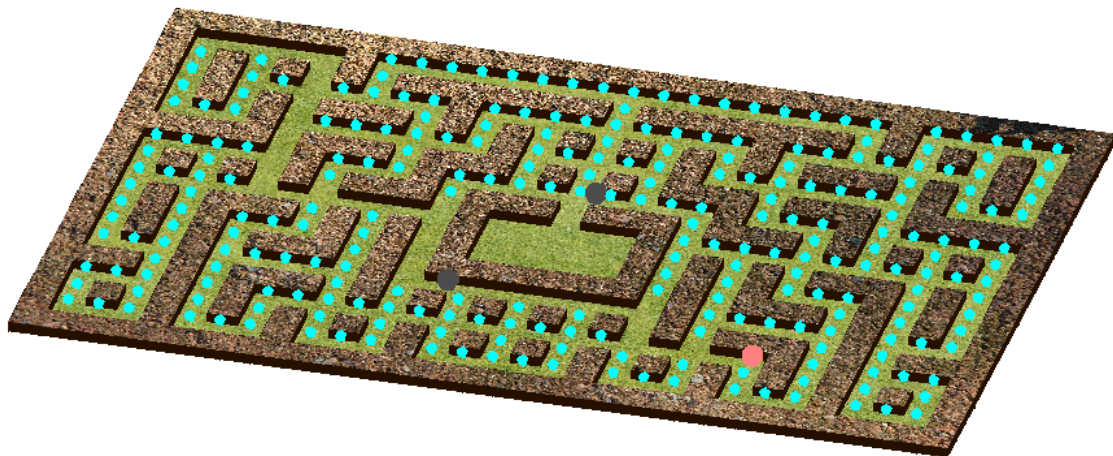


## Task 2. Inclusion of texture mapping

Some details are given next:

- Not all the polygons are required to be textured.

An example is next shown.



## Deadline

This activity is recommended to be handed in before **November, 17th, at 18.00h**, by uploading a **zipped file** containing the source code through the corresponding activity of the virtual campus.

Include **only** “.c”, “.cpp”, “.h” and “.jpg” files together with a “Makefile” script which compiles the project in a Linux console.

The group will be interviewed about the uploaded activity.