

Squash Project

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1. Project proposal
2. Objectives of the project
3. Development
4. Results
5. Conclusions and improvements

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Project proposal

Our idea is to create a “Squash” game mechanic inside OpenGL environment.



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Objectives of the project

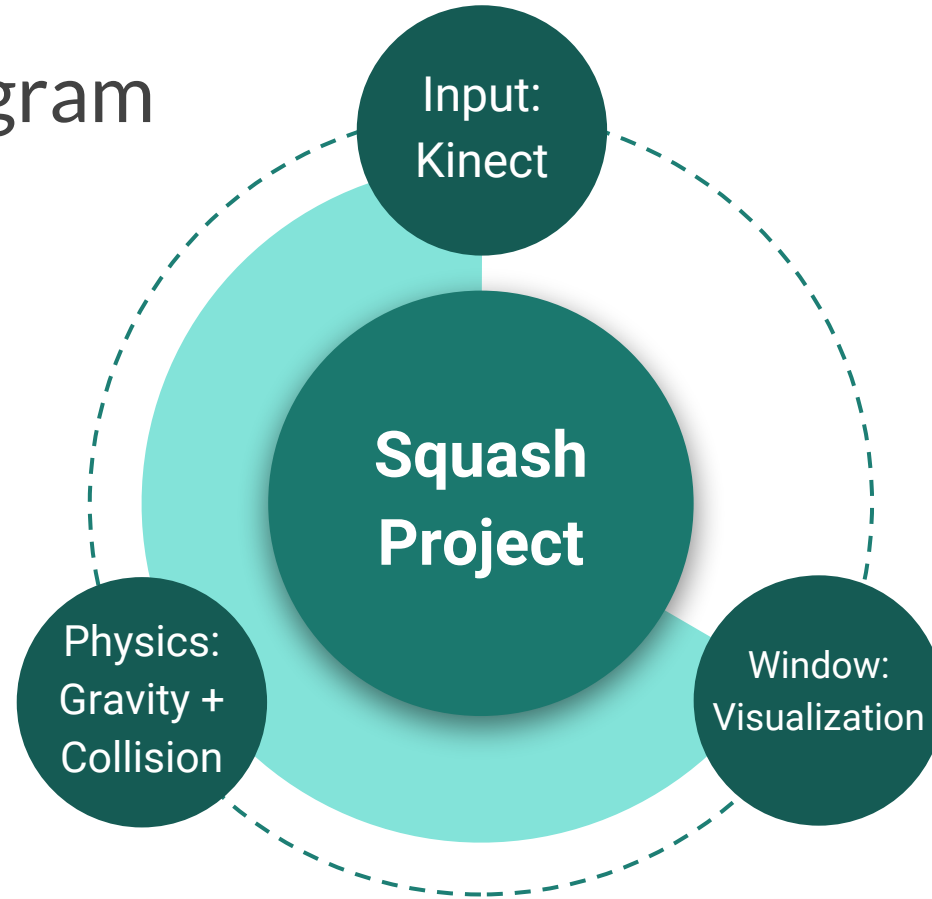
The main objective of this project is the implementation of a graphical application in Visual C ++ and OpenGL with the following features:

- Ability to influence motion control with Kinect
- Realistic physics
- Introducing a gameplay mechanic

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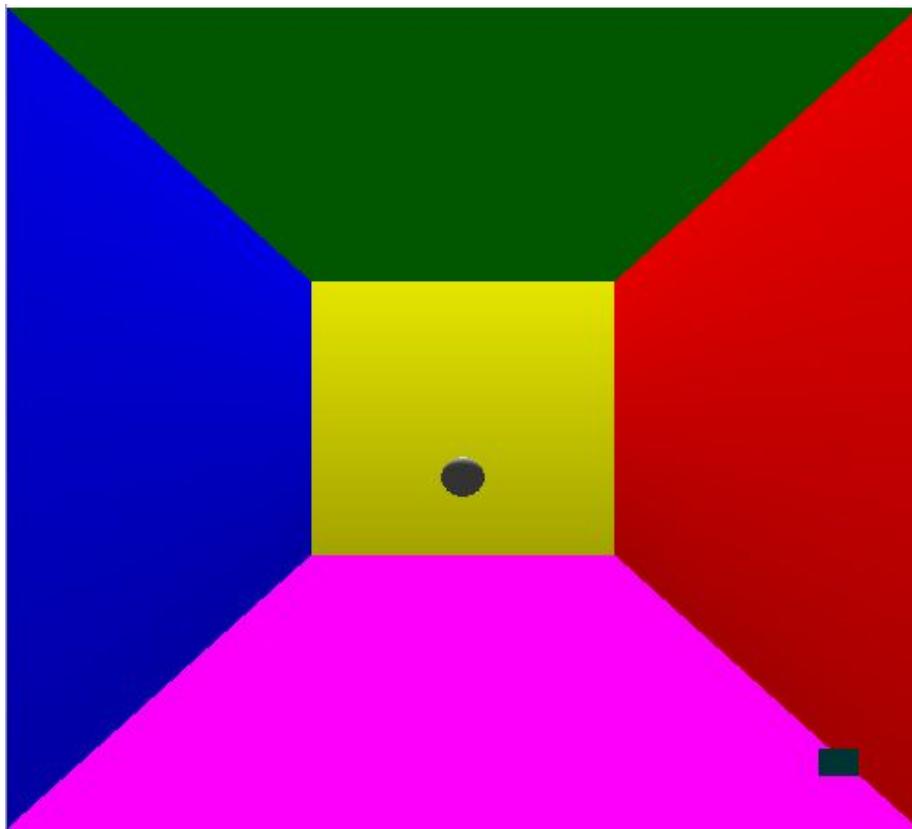
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Development diagram

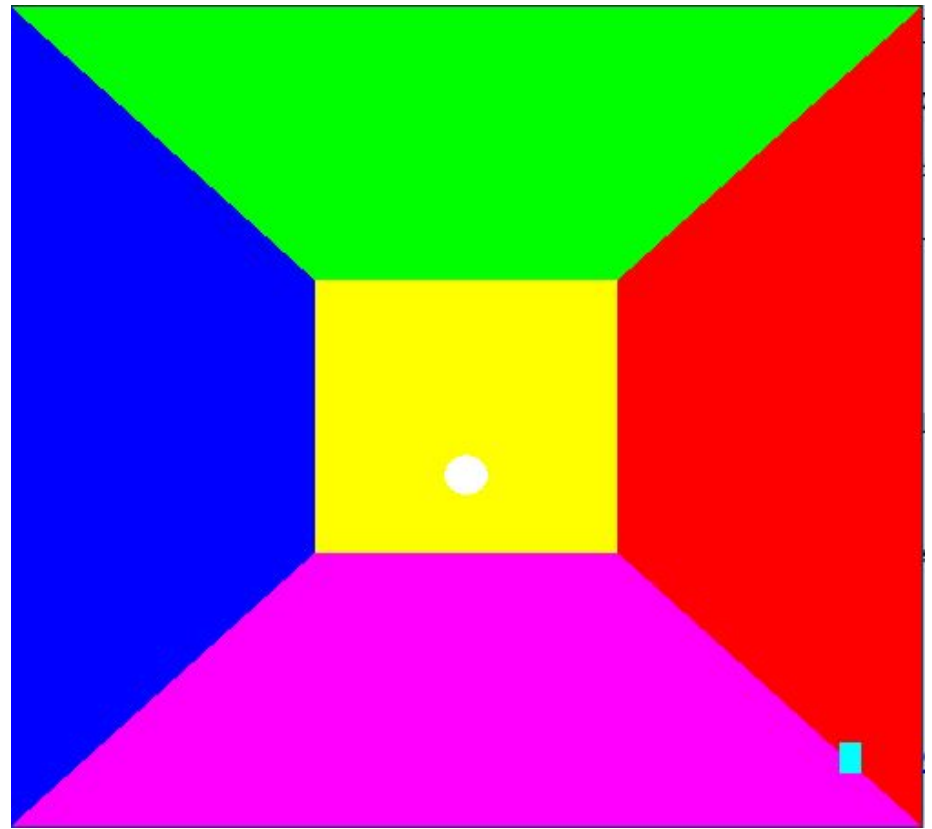


Development. Main tasks

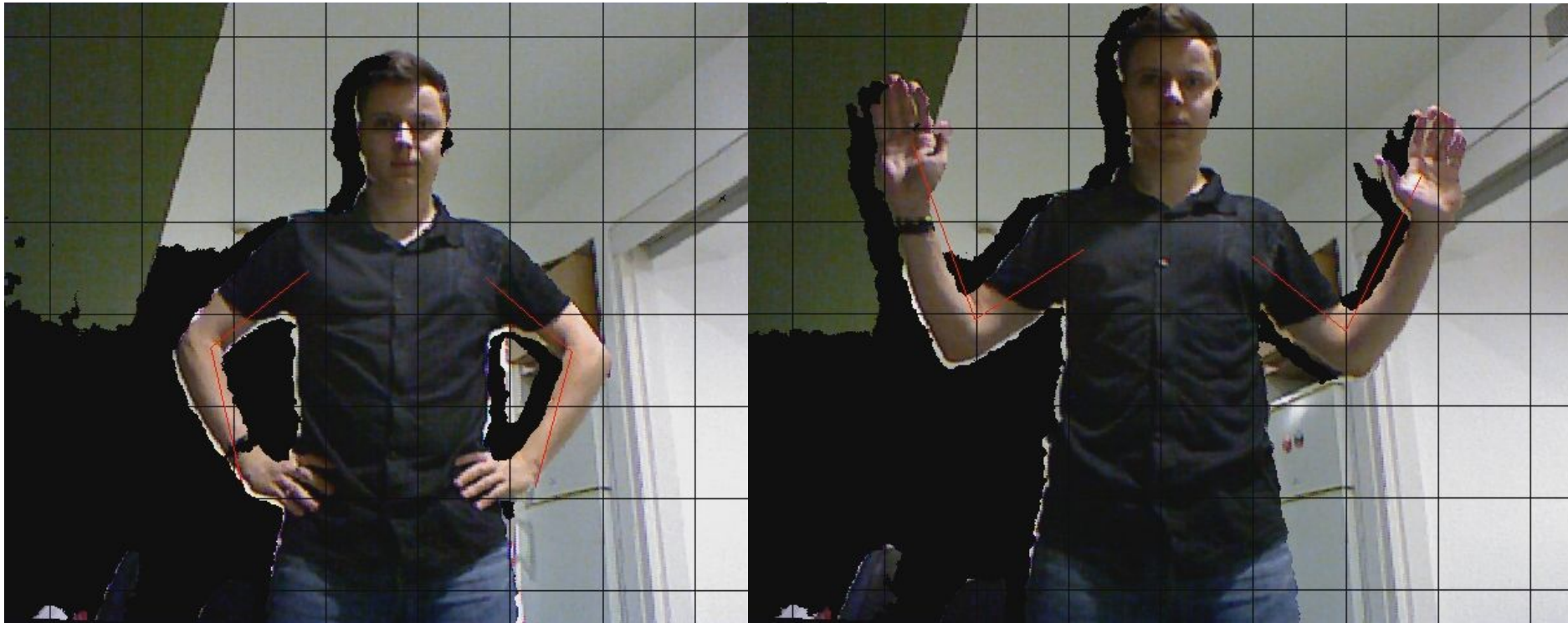
- Visualization
 - Lighting
 - Perspective and Orthogonal views
- Physics
- Kinect



With lighting



W/o lighting



Kinect MOCAP

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Launching Demo...

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Conclusions

- We have developed an application in Visual C ++ and OpenGL to display Squash game mechanic
- We have implemented physics and collision models for better visuals and gameplay
- During the implementation, we have seen that the OpenGL libraries, such as GLUT are useful to create proper camera angles
- Implementation of Kinect had a positive impact on interaction with objects

Improvements

- To add more visual techniques, such as anti-aliasing, filtering and etc. (new libraries, MSAA, anisotropic or linear filtering)
- To implement textures for better visuals
- To study different equations for superior physics and collision models (PhysX)

Thank you for your attention!

**Sincerely,
Squash Project Team**