PROJECT REPORT

Introduction:

My project is based on javascript and html canvas. It is used for simulation of reflection of light rays on mirrors, which are reflective on both sides. It also shows how the intensity of the light changes when the mirrors are partially reflective.

Problem Description:

The main problem was to calculate which of the mirrors will the light ray reflect from and at what time.

Solution:

Calculated at every timestep whether the head of the light ray is on (or near) any of the mirrors and then reflected from the respective mirror.

How To Use:

- First drag and drop the mouse to make mirrors (same as you draw lines in paint). You can draw any number of mirrors.
- Then press Key ‘P’ and click in the direction in which you want to send the light ray from the center of the canvas.
- You can even send multiple light ray. Just again press key ‘P’ and click in the direction you want to send from the center.
- You can press ‘P’ to even play or pause the simulation.
- If you want mirrors to be partially reflective, press key ‘A’. And to again to be fully reflective, again press key ‘A’.
- To get the path traced by the ray, press key ‘H’. (PS. It looks really good)

References:

http://canvas.zense.co.on/