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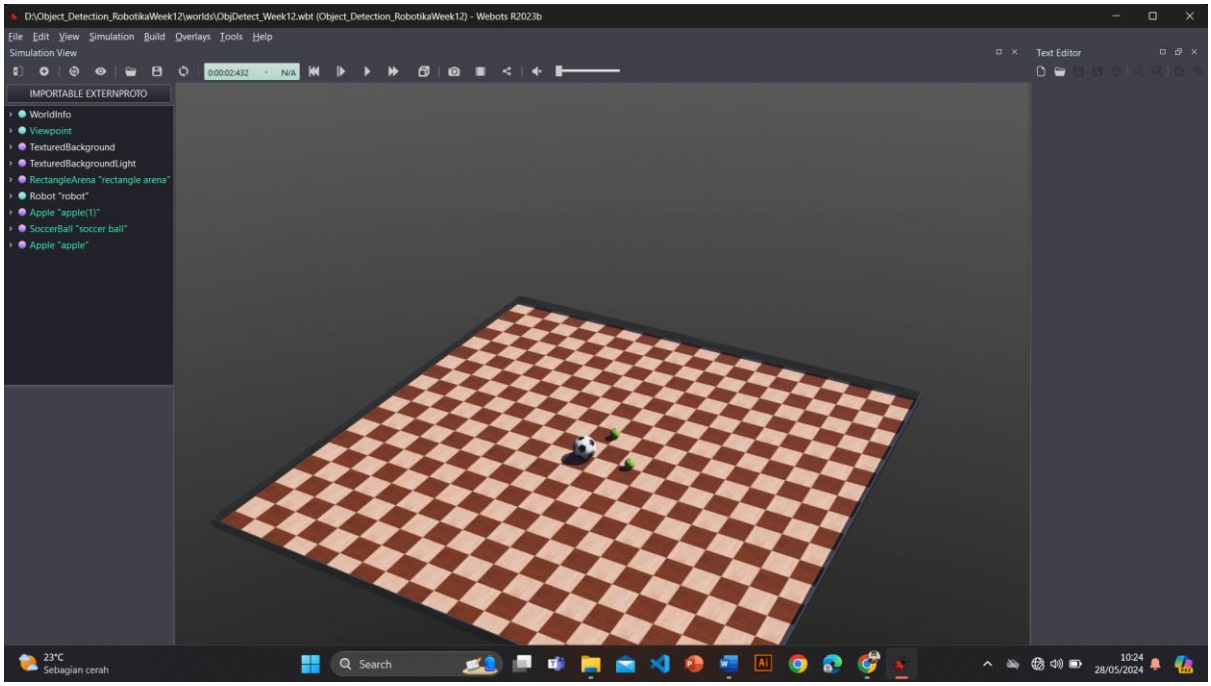
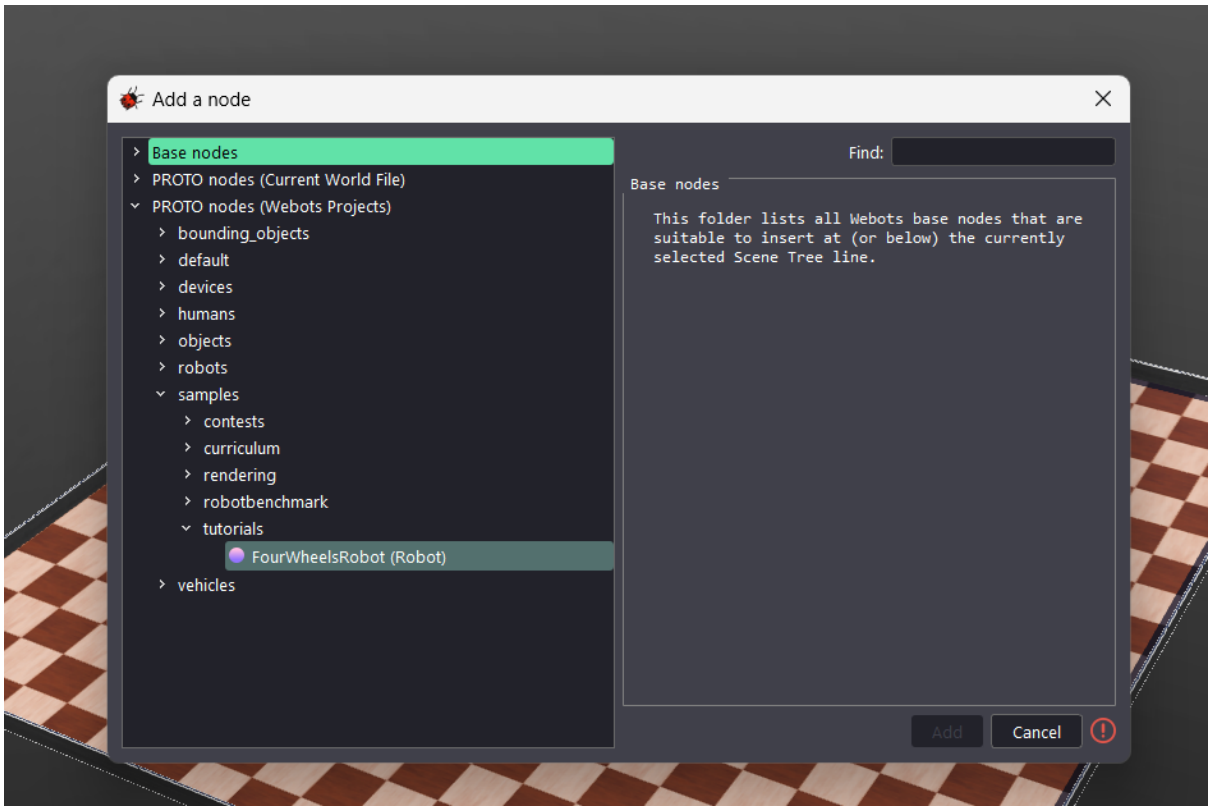
Report tugas week 12



Buatlah world baru dengan menambahkan beberapa object di dalamnya



Selanjutnya tambahkan robot FourWheelsRobot untuk mendeteksi object-object yang ada

Kendala : tidak bisa menambahkan robot FourWheelsRobot kedalam world

Code

```
#include <webots/DistanceSensor.hpp>
#include <webots/Motor.hpp>
#include <webots/Robot.hpp>
#include <webots/Camera.hpp>
#define TIME_STEP 64
using namespace webots;

int main(int argc, char **argv) {
 Robot *robot = new Robot();
 DistanceSensor *ds[2];
 char dsNames[2][10] = {"ds_right", "ds_left"};
 for (int i = 0; i < 2; i++) {
  ds[i] = robot->getDistanceSensor(dsNames[i]);
  ds[i]->enable(TIME_STEP);
 }

 Camera *cm;
 cm=robot -> getCamera("CAM");
 cm -> enable(TIME_STEP);
 cm -> recognitionEnable(TIME_STEP);

 Motor *wheels[4];
 char wheels_names[4][8] = {"wheel1", "wheel2", "wheel3", "wheel4"};
 for (int i = 0; i < 4; i++) {
  wheels[i] = robot->getMotor(wheels_names[i]);
  wheels[i]->setPosition(INFINITY);
  wheels[i]->setVelocity(0.0);
 }
 int avoidObstacleCounter = 0;
 while (robot->step(TIME_STEP) != -1) {
  double leftSpeed = 1.0;
  double rightSpeed = 1.0;
  if (avoidObstacleCounter > 0) {
   avoidObstacleCounter--;
   leftSpeed = 1.0;
   rightSpeed = -1.0;
  } else { // read sensors
   for (int i = 0; i < 2; i++) {
    if (ds[i]->getValue() < 950.0)
     avoidObstacleCounter = 100;
   }
  }
  wheels[0]->setVelocity(leftSpeed);
  wheels[1]->setVelocity(rightSpeed);
  wheels[2]->setVelocity(leftSpeed);
  wheels[3]->setVelocity(rightSpeed);
 }
 delete robot;
```

```
return 0;
} // EXIT_SUCCESS
```