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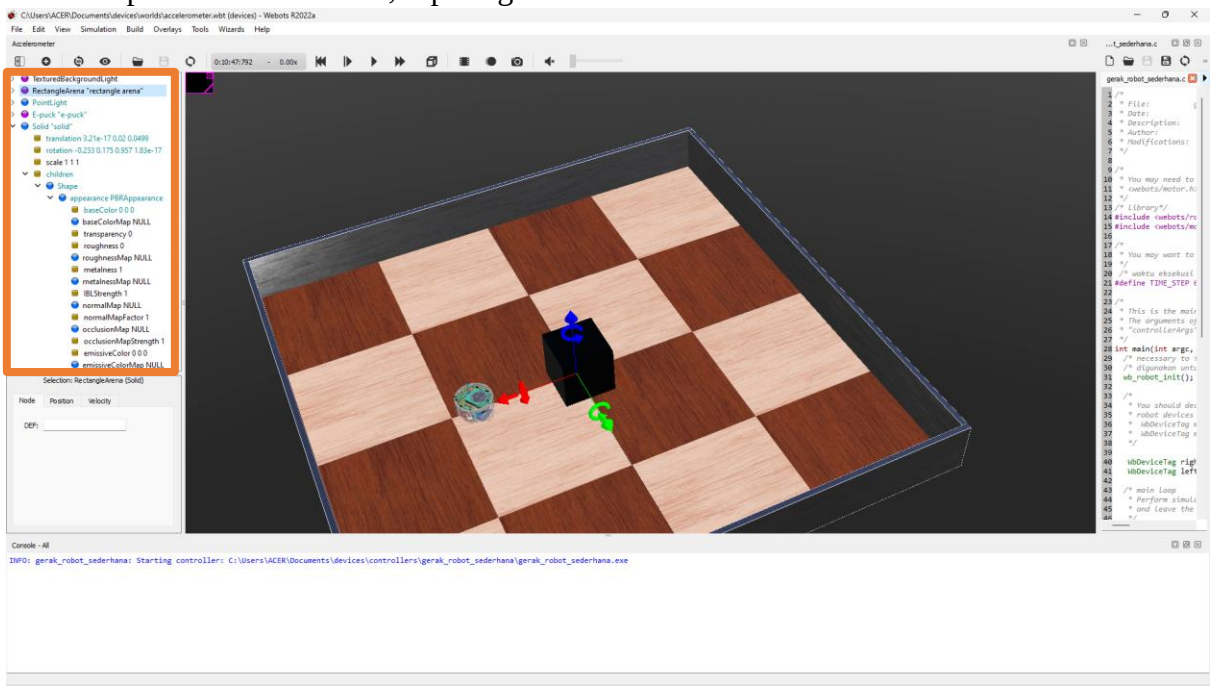
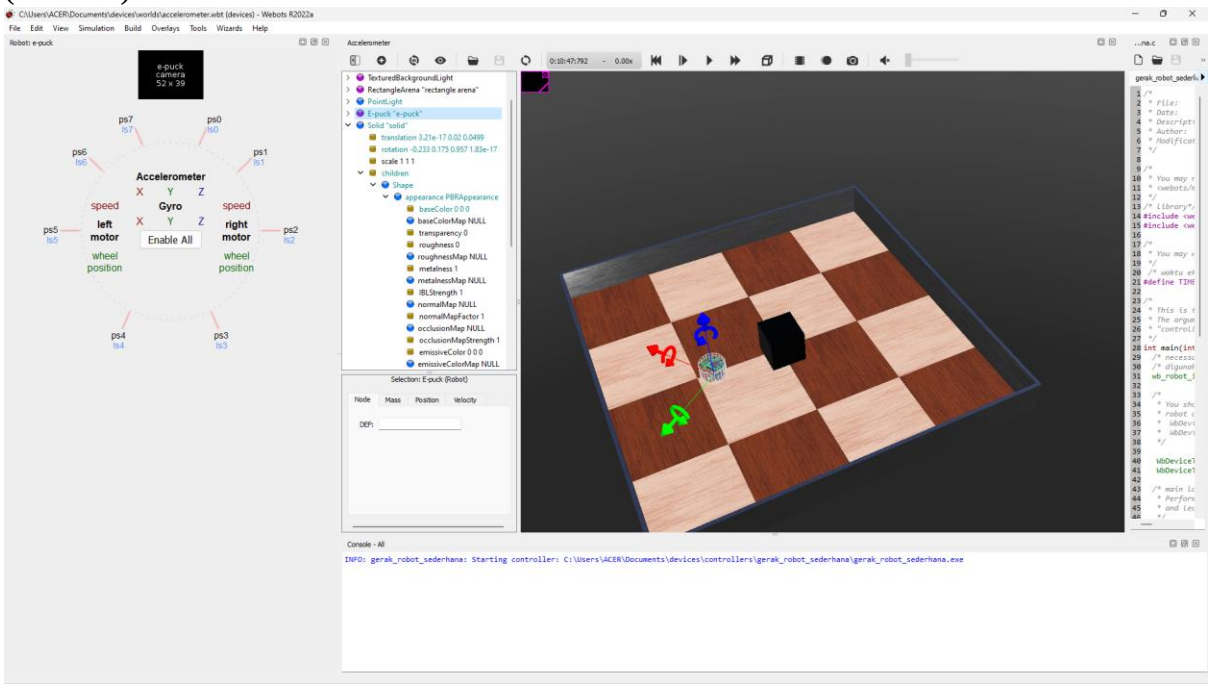
[Tugas – 2] – Lanjutan Robot E-Puck – Program Sensor Jarak Jauh Robot Beroda.

1. Lakukan penambahan elemen, seperti gambar dibawah ini.



Penambahan elemen dapat dilakukan pada area kotak *orange*.

2. Terdapat *right motor*, *left motor*, *accelerometer*, sensor kamera dan sensor pendeteksi jarak (8 sensor).



3. Menambahkan library.

```
#include <webots/distance_sensor.h>
```

4. Menambahkan program sensor, seperti pada gambar dibawah ini.

```
WbDeviceTag sensor0 = wb_robot_get_device("ps0");
WbDeviceTag sensor7 = wb_robot_get_device("ps7");
```

5. Mengganti gerakan rotor menjadi :

```
wb_motor_set_velocity(right_motor, 0.0);
wb_motor_set_velocity(left_motor, 0.0);
```

6. Mendefinisikan sensor.

```
wb_distance_sensor_enable(sensor0, TIME_STEP);
wb_distance_sensor_enable(sensor7, TIME_STEP);
```

7. Deklarasi nilai sensor.

```
double nilai_sensor0;
double nilai_sensor7;
nilai_sensor0 = wb_distance_sensor_get_value(sensor0);
nilai_sensor7 = wb_distance_sensor_get_value(sensor7);
```

8. Menambahkan standar input-output.

```
#include <stdio.h>
```

9. Menampilkan ouput.

```
printf("sensor0=");
printf("%f\n", nilai_sensor0);
printf("sensor7=");
printf("%f\n", nilai_sensor7);
```

10. Mendefinikan nilai motor.

```
double nilai_right_motor;
double nilai_left_motor;
```

11. Sensor jarak.

```
/* Process sensor data here */

if(nilai_sensor0<90 && nilai_sensor7<90)
{
  nilai_right_motor = 5;
  nilai_left_motor = 5;
}
else
{
  nilai_right_motor = 0;
  nilai_left_motor = 0;
}
/*
 * Enter here functions to send actuator commands, like:
 * wb_motor_set_position(my_actuator, 10.0);
 */

wb_motor_set_velocity(right_motor, nilai_right_motor);
wb_motor_set_velocity(left_motor, nilai_left_motor);
```