Importing your robot node to the test arena

1. Open your world file (.wbt) from a text editor. (Open the world which you made your robot. Not the provided arena)
2. In there, you can find your robot's node as a code as shown below.

```
DEF your_robot_DEF Robot {
  children [
    HingeJoint {
      jointParameters HingeJointParameters {
      }
      device [
        RotationalMotor {
        }
      ]
    }
    DEF body Solid {
      children [
        Shape {
          appearance PBRAppearance {
          }
          geometry Box {
            size 0.1 0.1 0.1
          }
        }
      ]
    }
  ]
  name "robot(1)"
}
```

3. Copy the content inside the **Robot { }** to the given PROTO (imported_robot.proto) file. **And change the controller's name to your robot's controller name.**

```
#VRML_SIM R2023a utf8
# Describe the functionality of your PROTO here.


PROTO imported_robot [
  field SFVec3f translation 0 0 0   # Is `Transform.translation`.
  field SFRotation rotation 0 0 0 1 # Is `Transform.rotation`.
  field SFString controller ""      # put your controller name inside the ""
]
{
   Robot {
    translation IS translation
    rotation IS rotation
    controller IS controller

    # paste your content from .wbt file here

  }
}
```

```
#VRML_SIM R2023a utf8
# Describe the functionality of your PROTO here.


PROTO imported_robot [
  field SFVec3f translation 0 0 0   # Is `Transform.translation`.
  field SFRotation rotation 0 0 0 1 # Is `Transform.rotation`.
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   Robot {
    translation IS translation
    rotation IS rotation
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    # paste your content from .wbt file here
    children [
    HingeJoint {
      jointParameters HingeJointParameters {
      }
      device [
        RotationalMotor {
        }
      ]
    }
    DEF body Solid {
      children [
        Shape {
          appearance PBRAppearance {
          }
          geometry Box {
            size 0.1 0.1 0.1
          }
        }
      ]
    }
  ]
  name "robot(1)"

  }
}
```
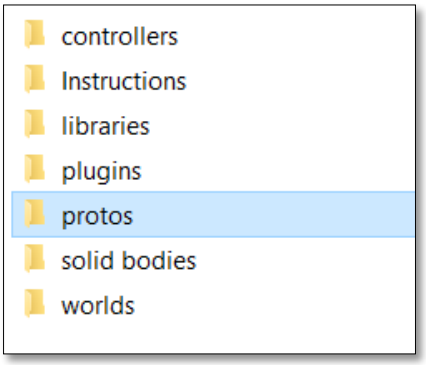
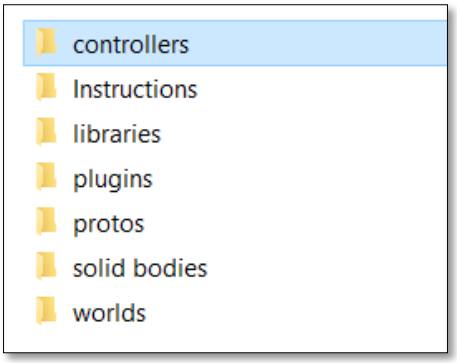
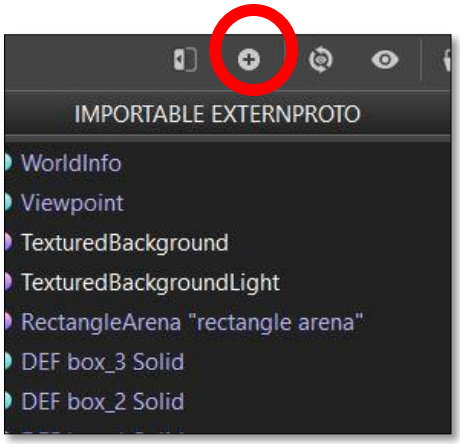

4. Now save the “imported_robot.proto” file and copy that PROTO file to the folder “protos” in the project directory.



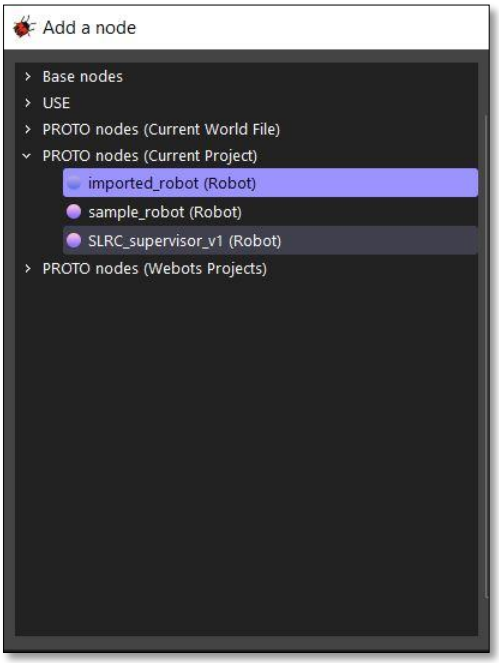
5. Copy your robot controller file to the folder “controllers”.



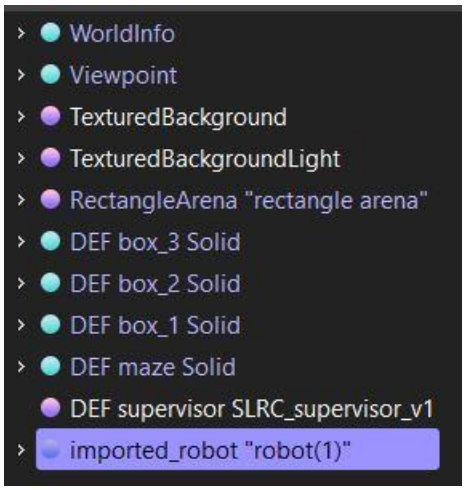
6. Now from webots node tree, import the robot node as below.
    a. Click add button



    b. Add the PROTO node from the project



c. Now you can see your robot in the scene tree, and you can run the simulation.



- **If you want to make changes in your robot (Children nodes of the robot), You must change the robot on your original world and copy the changes from ".wbt" file to the Robot { } part in ".proto" file in the "protos" folder.**
- **Then remove the old robot node from scene tree and import a new node to import those changes to the test arena.**
  (From the given PROTO file template, you can only change the "controller", "translation", "rotation" parameters of your robot from the scene tree)
- **If you are only changing the controller code of your robot, there is no need to do these steps repeatedly. Just update the controller code and run the simulation.**
- **If you need to know more about PROTO files, refer,**
  - **https://cyberbotics.com/doc/reference/proto**
  - **https://cyberbotics.com/doc/guide/tutorial-7-your-first-proto**