**Grupa:** ...

Nazwisko Imię, Nazwisko Imię, …

## Ćwiczenia

**Zad. 1.** Identyfikacja linków i jointów opisujących strukturę robota

|  |  |  |  |
| --- | --- | --- | --- |
| base  base\_footprint  base\_ref  lidar  lidar\_base | front\_left  front\_left\_base  front\_left\_mnt  front\_left\_caster  front\_right  front\_right\_base  front\_right\_caster  front\_right\_mnt | rear\_left  rear\_left\_base  rear\_left\_caster  rear\_left\_mnt  rear\_right  rear\_right\_base  rear\_right\_caster  rear\_right\_mnt | left\_wheel  left\_wheel\_base right\_wheel  right\_wheel\_base |

|  |  |
| --- | --- |
| **Linki** | **Jointy** |
|  |  |

**Zad. 2.** Wizualizacja robota

|  |  |  |
| --- | --- | --- |
| **RobotModel → Links** | | |
| **Link** | **Kolor** | **Kształt** |
| **base** |  |  |
| **base\_footprint** |  |  |
| **lidar** |  |  |
| **left\_wheel** |  |  |
| **front\_left\_caster** |  |  |

**Tf → Tree** (hierarchia układów współrzędnych)

|  |  |  |
| --- | --- | --- |
| base  base\_footprint  left\_wheel  lidar  right\_wheel | front\_left\_mnt  front\_left\_caster  front\_right\_mnt  front\_right\_caster | rear\_left\_caster  rear\_left\_mnt  rear\_right\_caster  rear\_right\_mnt |

|  |  |  |  |
| --- | --- | --- | --- |
| **Tf → Frames** | | | |
| **Frame** | **Oś** | **Oś** | **Oś** |
| **base** |  |  |  |
| **base\_footprint** |  |  |  |
| **left\_wheel** |  |  |  |

Zrzut ekranu z węzła

**Zad. 3.** Symulacja robota

|  |  |
| --- | --- |
| **Zad 3. c)** | |
| **Element** | **Ruch** (jest: V, brak: –) |
| robot |  |
| układ |  |
| układ |  |

**Zad. 4.** Symulacja robota

Zrzut ekranu (Gazebo + RViz)

**Zad.5.** SLAM

Mapa pomieszczenia