# RoboCup@Home

Forms & Score Sheets

# Registration Form

**Team name:** _____

**Team leader name:** _____

**Safety first!**

The speed of the robots should ensure safe operation. This means that the robot is not allowed to go faster than the local speed limits. During operation in an environment with humans it may not exceed a walking pace of humans (6 kph, 3.7 mph).

At any time when operating the robot inside and outside the scenario the owners have to stop the robot immediately if there is a remote possibility of dangerous behavior towards people and/or objects. If a referee, member of the Technical or Organizational committee, an Executive or Trustee of the federation tells the team to stop the robot, there will be no discussion and the robot has to be stopped *immediately*.

If the team does not comply, the team and its members can be excluded from the ongoing competition immediately by a decision of the RoboCup@Home Technical Committee. Furthermore, the team and its members can be banned from future competitions for a period not less than a year by a decision of the RoboCup Federation Trustee Board.

|  | **Robot 1** | **Robot 2** |
|---|---|---|
| Size of the robot | | |
| Emergency button(s) | | |
| Start button | | |
| Collision avoidance | | |
| Voice of the robot | | |
| Robot speaker system | | |
| Use of external devices | | |
| ASR Bypassing method | | |
| Other safety issues | | |
| Custom containers. | | |

**External Devices:**

I have read and fully understood the "Safety First" statement and agree to it. Furthermore, I agree to obey the rules in the official RoboCup@Home RuleBook.

_____    _____
*Date & time*                           *Team leader*

# Score Sheet

**Test:**       Poster Session

**Team name:**    _____

**Referee name:**   _____

**Instructions:**

1. Please watch all posters carefully.
2. There will be a team member for questions about the poster.
3. After viewing the poster and asking your questions you may have, please fill in the evaluation sheet below.
4. Is not allowed to evaluate your own team.
5. You may use the space below "Remarks:" to take notes for yourself.
6. Enter your team's name ("Team name") and your name ("referee name") on top of the sheet.
7. Sign the form using either "Referee" or "Team leader" slots at the bottom.

**Evaluation sheet**

| Team | Overall score of poster (0-10) |
|---|---|
| Austin Villa@Home | |
| Australian Centre for Robotic Vision | |
| CARL@Home | |
| CATIE Robotics | |
| eR@sers | |
| Hibikino-Musashi@Home | |
| homer@UniKoblenz | |
| KameRider OPL | |
| KameRider SSPL | |
| LiU@HomeWreckers | |
| LyonTech | |
| ORIon | |
| Pumas | |
| PUMAS-DSPL | |
| RoboCanes-VISAGE | |
| RoboFEI@Home | |
| RT Lions | |
| SinfonIA Pepper Team | |
| Team Northeastern | |
| Team Tidyboy | |
| Tech United Eindhoven | |
| Tinker | |
| Uchile Pepper | |
| UNSW@Home | |
| UTS Unleashed! | |
| Walking Machine | |

**Remarks:**

_____          _____          _____
*Date & time*                     *Referee*                         *Team leader*

# Score Sheet

**Test:**          Carry my Luggage

**Team name:**     _____

**Referee name:**  _____

The maximum time for this test is 5 minutes.

| Action | Score | $1^{st}$ try | $2^{nd}$ try | $3^{rd}$ try |
|---|---|---|---|---|
| ***Main Goal*** | | | | |
| Picking up the correct bag | *100* | _____ | _____ | _____ |
| Following the person to the car | *300* | _____ | _____ | _____ |
| Avoiding the crowd of people obstructing the path | *50* | _____ | _____ | _____ |
| Avoiding the small object on the ground | *50* | _____ | _____ | _____ |
| Avoiding the hard-to-see object | *50* | _____ | _____ | _____ |
| Avoiding the area blocked with retractable barriers | *50* | _____ | _____ | _____ |
| | | | | |
| ***Bonus rewards*** | | | | |
| Re-entering the arena | *100* | _____ | _____ | _____ |
| Joining and staying in the queue on the way to the arena | *300* | _____ | _____ | _____ |
| | | | | |
| ***Regular Penalties*** | | | | |
| Dropping the bag | *50* | _____ | _____ | _____ |
| | | | | |
| ***Deus Ex Machina Penalties*** | | | | |
| Rediscovering the operator by natural interaction | *–50* | _____ | _____ | _____ |
| Rediscovering the operator by unnatural interaction | *–100* | _____ | _____ | _____ |
| Rediscovering the operator by direct contact | *–200* | _____ | _____ | _____ |
| | | | | |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *–500* | _____ | _____ | _____ |
| Using alternative start signal | *–100* | _____ | _____ | _____ |
| ***Score per try*** | *1050* | _____ | _____ | _____ |
| **Total Score** | *1155* | _____ | | |

**Remarks:**

_____          _____          _____
*Date & time*                    *Referee*                        *Team leader*

# Score Sheet

**Test:**      Clean Up

**Team name:**    _____

**Referee name:**   _____

**Maximum time**:                                5 minutes

| Action | Score | $1^{st}$ **try** | $2^{nd}$ **try** | $3^{rd}$ **try** |
|---|---|---|---|---|
| ***Regular Rewards*** | | | | |
| Place an object at the appropriate location | *6×100* | _____ | _____ | _____ |
| ***Bonus Rewards*** | | | | |
| Moving a *tiny* object | *200* | _____ | _____ | _____ |
| Moving a *heavy* object | *200* | _____ | _____ | _____ |
| ***Regular Penalties*** | | | | |
| Place an object at the wrong location | *6×–50* | _____ | _____ | _____ |
| ***Deus ex Machina Penalties*** | | | | |
| Physically interacting with object | *6×–60* | _____ | _____ | _____ |
| Guiding the robot near an object to be moved | *6×–40* | _____ | _____ | _____ |
| Telling where an object can be found | *6×–30* | _____ | _____ | _____ |
| Telling robot which category an object is or where to place it | *6×–30* | _____ | _____ | _____ |
| Pointing out object to be moved | *6×–20* | _____ | _____ | _____ |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *–500* | _____ | _____ | _____ |
| Using alternative start signal | *–100* | _____ | _____ | _____ |
| ***Score per try*** | *1000* | _____ | _____ | _____ |
| **Total Score** | *1100* | _____ | | |

**Remarks:**

_____      _____     _____
*Date & time*                            *Referee*                           *Team leader*

# Score Sheet

**Test:**  Farewell

**Team name:**  _____

**Referee name:**  _____

The maximum time for this test is 5 minutes.

| Action | Score | $1^{st}$ try | $2^{nd}$ try | $3^{rd}$ try |
|---|---|---|---|---|
| ***Main Goal*** | | | | |
| Each guest successfully guided to thier cab | *2×200* | _____ | _____ | _____ |
| Identifying the medical doctor | *200* | _____ | _____ | _____ |
| | | | | |
| ***Bonus rewards*** | | | | |
| Delivering the right coat | *2×100* | _____ | _____ | _____ |
| Entertaining guest with conversation while ushering person to the cab | *2×100* | _____ | _____ | _____ |
| | | | | |
| ***Deus Ex Machina*** | | | | |
| Tell the robot which guest is leaving | *2×–30* | _____ | _____ | _____ |
| Guiding the robot to the cab | *2×–120* | _____ | _____ | _____ |
| Guiding the robot back to the house | *2×–120* | _____ | _____ | _____ |
| Tell robot which person is a medical doctor | *–200* | _____ | _____ | _____ |
| Handover the coat | *2×–100* | _____ | _____ | _____ |
| | | | | |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *–500* | _____ | _____ | _____ |
| Using alternative start signal | *–100* | _____ | _____ | _____ |
| ***Score per try*** | *1000* | _____ | _____ | _____ |
| **Total Score** | *1100* | _____ | | |

**Remarks:**

_____  _____  _____
*Date & time*          *Referee*                *Team leader*

# Score Sheet

**Test:**          Find my Mates

**Team name:**   _____

**Referee name:**   _____

The maximum time for this test is 5 minutes.

| Action | Score | $1^{st}$ try | $2^{nd}$ try | $3^{rd}$ try |
|---|---|---|---|---|
| **Main Goal** | | | | |
| Report a guest location | $2\times 100$ | _____ | _____ | _____ |
| Provide location unique feature | $2\times 50$ | _____ | _____ | _____ |
| Provide description of a guest | $2\times 150$ | _____ | _____ | _____ |
| **Bonus rewards** | | | | |
| Report the 3rd guest location | $150$ | _____ | _____ | _____ |
| Provide description of a 3rd guest | $250$ | _____ | _____ | _____ |
| **Deus Ex Machina** | | | | |
| Person has to wave the robot in order to be found | $2\times{-75}$ | _____ | _____ | _____ |
| Person has to tell the robot where he/she is sitting/standing | $2\times{-75}$ | _____ | _____ | _____ |
| Person has to approach the robot (e.g. walk and stand in front of it) | $2\times{-150}$ | _____ | _____ | _____ |
| **Special Penalties & Bonuses** | | | | |
| Not attending | $-500$ | _____ | _____ | _____ |
| Using alternative start signal | $-100$ | _____ | _____ | _____ |
| **Score per try** | $1000$ | _____ | _____ | _____ |
| **Total Score** | $1100$ | _____ | | |

**Remarks:**

_____     _____     _____

*Date & time*                   *Referee*                   *Team leader*

# Score Sheet

**Test:**        General Purpose Service Robot

**Team name:**        _____

**Referee name:**        _____

The maximum time for this test is 5 minutes.

| Action | Score | $1^{st}$ **try** | $2^{nd}$ **try** | $3^{rd}$ **try** |
|---|---|---|---|---|
| **_Main Goal_** | | | | |
| Executing the task associated with each command | _3×400_ | _____ | _____ | _____ |
| | | | | |
| **_Bonus Rewards_** | | | | |
| Understanding a command given by a non-expert operator | _3×100_ | _____ | _____ | _____ |
| | | | | |
| **_Deus Ex Machina Penalties_** | | | | |
| Using a custom operator | _3×–50_ | _____ | _____ | _____ |
| Bypassing speech recognition | _3×–50_ | _____ | _____ | _____ |
| Instructing a human to perform the task | _3×–400_ | _____ | _____ | _____ |
| | | | | |
| **_Special Penalties & Bonuses_** | | | | |
| Not attending | _–500_ | _____ | _____ | _____ |
| Using alternative start signal | _–100_ | _____ | _____ | _____ |
| | | | | |
| **_Score per try_** | _1500_ | _____ | _____ | _____ |
| | | | | |
| **Total Score** | _1650_ | _____ | | |

**Remarks:**

_____        _____        _____
_Date & time_                          _Referee_                                    _Team leader_

# Score Sheet

**Test:** Receptionist

**Team name:** _____

**Referee name:** _____

The maximum time for this test is 5 minutes.

| Action | Score | $1^{st}$ **try** | $2^{nd}$ **try** | $3^{rd}$ **try** |
|---|---|---|---|---|
| ***Main Goal*** | | | | |
| Introduce a new guest to every other guest and offer a seat | *2×250* | _____ | _____ | _____ |
| Look at the person talking | *50* | _____ | _____ | _____ |
| Look at the person being described | *50* | _____ | _____ | _____ |
| Look in the direction of navigation | *50* | _____ | _____ | _____ |
| Continue with wrong name or drink | *2×−50* | _____ | _____ | _____ |
| Persistent inappropriate gaze - away from conversational partner | *2×−50* | _____ | _____ | _____ |
| Persistent gaze not in the direction of the navigation while moving | *−50* | _____ | _____ | _____ |
| | | | | |
| ***Bonus Rewards*** | | | | |
| Open the entrance door for a guest | *2×100* | _____ | _____ | _____ |
| Describe the first guest to the second guest | *150* | _____ | _____ | _____ |
| | | | | |
| ***Deus Ex Machina*** | | | | |
| Alternative HRI | *2×−75* | _____ | _____ | _____ |
| Not recognizing people | *2×−200* | _____ | _____ | _____ |
| | | | | |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *−500* | _____ | _____ | _____ |
| | | | | |
| ***Score per try*** | *1000* | _____ | _____ | _____ |
| | | | | |
| **Total Score** | *1100* | _____ | | |

**Remarks:**

_____     _____     _____
*Date & time*                                    *Referee*                                         *Team leader*

# Score Sheet

**Test:**  Serving Drinks

**Team name:**  _____

**Referee name:**  _____

The maximum time for this test is **5 minutes**.

| Action | Score | $1^{st}$ **try** | $2^{nd}$ **try** | $3^{rd}$ **try** |
|---|---|---|---|---|
| ***Main Goal*** | | | | |
| Approaching guest without a drink and take order | *3×50* | _____ | _____ | _____ |
| Picking up correct drink from the bar | *3×80* | _____ | _____ | _____ |
| Delivering a drink to the right person | *3×70* | _____ | _____ | _____ |
| | | | | |
| ***Bonus rewards*** | | | | |
| Informing a guest of drink unavailability upon request | *200* | _____ | _____ | _____ |
| Correcting the bartender | *2×100* | _____ | _____ | _____ |
| | | | | |
| ***Regular Penalties*** | | | | |
| Approaching guest with a drink and take order (per wrong guest) | *–50* | _____ | _____ | _____ |
| Approaching the host to take an order | *–50* | _____ | _____ | _____ |
| | | | | |
| ***Deus Ex Machina Penalties*** | | | | |
| Guest waves to the robot to place order | *3×–30* | _____ | _____ | _____ |
| Guest approaches the robot to place order | *3×–50* | _____ | _____ | _____ |
| Drink handed over to the robot (bypass picking) | *3×–30* | _____ | _____ | _____ |
| Drink taken by a guest (bypass drink handover) | *3×–30* | _____ | _____ | _____ |
| | | | | |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *–500* | _____ | _____ | _____ |
| Using alternative start signal | *–100* | _____ | _____ | _____ |
| | | | | |
| ***Score per try*** | *1000* | _____ | _____ | _____ |
| | | | | |
| **Total Score** | *1100* | _____ | | |

**Remarks:**

_____          _____          _____
*Date & time*                          *Referee*                                  *Team leader*

# Score Sheet

**Test:**   Serve the Breakfast

**Team name:**   _____

**Referee name:**   _____

The maximum time for this test is 5 minutes.

| Action | Score | $1^{st}$ **try** | $2^{nd}$ **try** | $3^{rd}$ **try** |
|---|---|---|---|---|
| ***Main Goal*** | | | | |
| Picking up breakfast items for transportation to the table | *4×15* | _____ | _____ | _____ |
| Placing breakfast items on the table | *4×60* | _____ | _____ | _____ |
| Pouring cereal into the bowl | *300* | _____ | _____ | _____ |
| ***Bonus Rewards*** | | | | |
| Pouring milk into the bowl | *300* | _____ | _____ | _____ |
| Placing a spoon next to the bowl | *100* | _____ | _____ | _____ |
| ***Regular Penalties*** | | | | |
| Throwing or dropping an object on the table | *4×–30* | _____ | _____ | _____ |
| Spilling cereal while pouring | *–100* | _____ | _____ | _____ |
| Spilling milk while pouring | *–150* | _____ | _____ | _____ |
| ***Deus Ex Machina Penalties*** | | | | |
| Pointing at an object | *4×–25* | _____ | _____ | _____ |
| Handing an object over to the robot | *4×–50* | _____ | _____ | _____ |
| A human placing an object on the table | *4×–75* | _____ | _____ | _____ |
| A human pouring cereal in the bowl | *–300* | _____ | _____ | _____ |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *–500* | _____ | _____ | _____ |
| Using alternative start signal | *–100* | _____ | _____ | _____ |
| ***Score per try*** | *1000* | _____ | _____ | _____ |
| **Total Score** | *1100* | _____ | | |

**Remarks:**

_____   _____   _____
*Date & time*                    *Referee*                          *Team leader*

# Score Sheet

**Test:**  Storing Groceries

**Team name:**  _____

**Referee name:**  _____

The maximum time for this test is 5 minutes.

| Action | Score | $1^{st}$ **try** | $2^{nd}$ **try** | $3^{rd}$ **try** |
|---|---|---|---|---|
| ***Main Goal*** | | | | |
| Picking up an object for transportation to the cabinet | *5×30* | _____ | _____ | _____ |
| Moving an object next to similar objects on the cabinet | *5×90* | _____ | _____ | _____ |
| ***Bonus Rewards*** | | | | |
| Opening the cabinet door without human help | *200* | _____ | _____ | _____ |
| Moving a tiny object | *100* | _____ | _____ | _____ |
| Moving a heavy object | *100* | _____ | _____ | _____ |
| ***Regular Penalties*** | | | | |
| Storing an object without categorizing it correctly | *5×–60* | _____ | _____ | _____ |
| ***Deus Ex Machina Penalties*** | | | | |
| A human pointing at a target location | *5×–30* | _____ | _____ | _____ |
| A human handing an object over to the robot | *5×–30* | _____ | _____ | _____ |
| A human moving an object | *5×–100* | _____ | _____ | _____ |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *–500* | _____ | _____ | _____ |
| Using alternative start signal | *–100* | _____ | _____ | _____ |
| ***Score per try*** | *1000* | _____ | _____ | _____ |
| **Total Score** | *1100* | _____ | | |

**Remarks:**

_____   _____   _____
*Date & time*                           *Referee*                            *Team leader*

# Score Sheet

**Test:**          Take out Garbage

**Team name:**          _____

**Referee name:**          _____

**Maximum time**:                                                                    5 minutes

| Action | Score | $1^{st}$ try | $2^{nd}$ try | $3^{rd}$ try |
|---|---|---|---|---|
| ***Regular Rewards*** | | | | |
| Move a bag inside the designated zone | *2×300* | _____ | _____ | _____ |
| ***Bonus Rewards*** | | | | |
| Opening the bin lid | *2×100* | _____ | _____ | _____ |
| Carry both bags at once | *200* | _____ | _____ | _____ |
| ***Regular Penalties*** | | | | |
| Placing bag outside collection zone | *2×−100* | _____ | _____ | _____ |
| Tipping a bin / tearing a bag | *2×−50* | _____ | _____ | _____ |
| ***Deus ex Machina Penalties*** | | | | |
| Receiving the bag via handover | *2×−250* | _____ | _____ | _____ |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *−500* | _____ | _____ | _____ |
| Using alternative start signal | *−100* | _____ | _____ | _____ |
| ***Score per try*** | *1000* | _____ | _____ | _____ |
| **Total Score** | *1100* | _____ | | |

**Remarks:**

_____          _____          _____
*Date & time*                                    *Referee*                                      *Team leader*

# Score Sheet

**Test:**          Clean the Table

**Team name:**     _____

**Referee name:**  _____

The maximum time for this test is 10 minutes.

| Action | Score | $1^{st}$ **try** | $2^{nd}$ **try** | $3^{rd}$ **try** |
|---|---|---|---|---|
| ***Main Goal*** | | | | |
| Picking tableware and cutlery for transportation to the dishwasher | *5×60* | _____ | _____ | _____ |
| Placing the tableware and cutlery inside the dishwasher | *5×180* | _____ | _____ | _____ |
| | | | | |
| ***Bonus Rewards*** | | | | |
| Opening the dishwasher door | *200* | _____ | _____ | _____ |
| Pulling out the dishwasher rack | *100* | _____ | _____ | _____ |
| Placing an item correctly in the dishwasher | *5×40* | _____ | _____ | _____ |
| Placing the dishwasher tab inside the dishwasher | *300* | _____ | _____ | _____ |
| | | | | |
| ***Deus Ex Machina Penalties*** | | | | |
| Pointing at an object or telling the robot where an object is | *5×–25* | _____ | _____ | _____ |
| Handing an object over to the robot | *5×–60* | _____ | _____ | _____ |
| | | | | |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *–500* | _____ | _____ | _____ |
| Using alternative start signal | *–100* | _____ | _____ | _____ |
| | | | | |
| ***Score per try*** | *2000* | _____ | _____ | _____ |
| | | | | |
| **Total Score** | *2200* | _____ | | |

**Remarks:**

_____     _____     _____
*Date & time*                      *Referee*                          *Team leader*

# Score Sheet

**Test:** Enhanced General Purpose Service Robot

**Team name:** _____

**Referee name:** _____

The maximum time for this test is 10 minutes.

| Action | Score | $1^{st}$ **try** | $2^{nd}$ **try** | $3^{rd}$ **try** |
|---|---|---|---|---|
| ***Main Goal*** | | | | |
| Executing the task associated with each command | *3×800* | _____ | _____ | _____ |
| | | | | |
| ***Bonus rewards*** | | | | |
| Understanding a command given by a non-expert operator | *3×200* | _____ | _____ | _____ |
| | | | | |
| ***Deus Ex Machina Penalties*** | | | | |
| Using a custom operator | *3×–100* | _____ | _____ | _____ |
| Bypassing speech recognition | *3×–100* | _____ | _____ | _____ |
| Instructing a human to perform the task | *3×–500* | _____ | _____ | _____ |
| | | | | |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *–500* | _____ | _____ | _____ |
| Using alternative start signal | *–100* | _____ | _____ | _____ |
| | | | | |
| ***Score per try*** | *3000* | _____ | _____ | _____ |
| | | | | |
| **Total Score** | *3300* | _____ | | |

**Remarks:**

_____    _____    _____
*Date & time*                              *Referee*                                *Team leader*

# Score Sheet

**Test:**        Find my Disk

**Team name:**        _____

**Referee name:**        _____

The maximum time for this test is 5 minutes.

| Action | Score | $1^{st}$ **try** | $2^{nd}$ **try** | $3^{rd}$ **try** |
|---|---|---|---|---|
| ***Main Goal*** | | | | |
| Provide an accurate description of the desired disk | *600* | _____ | _____ | _____ |
| Desired disk is found | *600* | _____ | _____ | _____ |
| | | | | |
| ***Bonus rewards*** | | | | |
| Help operator to find a second disk | *800* | _____ | _____ | _____ |
| | | | | |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *–500* | _____ | _____ | _____ |
| Using alternative start signal | *–100* | _____ | _____ | _____ |
| | | | | |
| ***Score per try*** | *2000* | _____ | _____ | _____ |
| | | | | |
| **Total Score** | *2200* | _____ | | |

**Remarks:**

_____          _____          _____
*Date & time*                                      *Referee*                                                  *Team leader*

# Score Sheet

**Test:** Hand me That

**Team name:** _____

**Referee name:** _____

The maximum time for this test is 10 minutes.

| Action | Score | $1^{st}$ try | $2^{nd}$ try | $3^{rd}$ try |
|---|---|---|---|---|
| ***Main Goal*** | | | | |
| Correctly determine each item | *5×400* | _____ | _____ | _____ |
| Correctly determine an item on the second attempt | *5×−150* | _____ | _____ | _____ |
| Correctly determine an item on the third or fourth attempt | *5×−300* | _____ | _____ | _____ |
| Correctly determine an item on a subsequent attempt | *5×−400* | _____ | _____ | _____ |
| Asking 1 clarifying question | *5×−100* | _____ | _____ | _____ |
| Asking 2 clarifying questions | *5×−200* | _____ | _____ | _____ |
| Asking 3 or more clarifying questions | *5×−350* | _____ | _____ | _____ |
| ***Deus ex Machina Penalties*** | | | | |
| Being told the name of the object | *5×−400* | _____ | _____ | _____ |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *−500* | _____ | _____ | _____ |
| Using alternative start signal | *−100* | _____ | _____ | _____ |
| ***Score per try*** | *2000* | _____ | _____ | _____ |
| **Total Score** | *2200* | _____ | | |

**Remarks:**

_____     _____     _____
*Date & time*                              *Referee*                                  *Team leader*

# Score Sheet

**Test:**          Set the Table

**Team name:**     _____

**Referee name:**  _____

The maximum time for this test is 10 minutes.

| Action | Score | $1^{st}$ try | $2^{nd}$ try | $3^{rd}$ try |
|---|---|---|---|---|
| ***Main Goal*** | | | | |
| Open the drawer or cupboard door | *100* | _____ | _____ | _____ |
| Pick up plate and cup | *2×50* | _____ | _____ | _____ |
| Pick up knife, spoon, and fork | *3×150* | _____ | _____ | _____ |
| Pick up napkin | *50* | _____ | _____ | _____ |
| Correctly place each item | *5×100* | _____ | _____ | _____ |
| Pointing at object | *5×–25* | _____ | _____ | _____ |
| Pointing at destination | *5×–50* | _____ | _____ | _____ |
| | | | | |
| ***Bonus rewards*** | | | | |
| Layplace mat before objects | *500* | _____ | _____ | _____ |
| Placing all objects correctly | *250* | _____ | _____ | _____ |
| Closing the door or drawer | *50* | _____ | _____ | _____ |
| | | | | |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *–500* | _____ | _____ | _____ |
| Using alternative start signal | *–100* | _____ | _____ | _____ |
| ***Score per try*** | *2000* | _____ | _____ | _____ |
| **Total Score** | *2200* | _____ | | |

**Remarks:**

_____          _____          _____
*Date & time*                         *Referee*                              *Team leader*

# Score Sheet

**Test:** Restaurant

**Team name:** _____

**Referee name:** _____

**Maximum time**:                                                                 15 minutes

| Action | Score | $1^{st}$ **try** | $2^{nd}$ **try** | $3^{rd}$ **try** |
|---|---|---|---|---|
| **Regular Rewards** | | | | |
| Detect calling or waving customer (per order). | *2×100* | _____ | _____ | _____ |
| Reach a customer's table without prior guidance/training (per order). | *2×100* | _____ | _____ | _____ |
| Take and serve an order. | *2×600* | _____ | _____ | _____ |
| **Bonus Rewards** | | | | |
| Use an unattached tray to transport (per order). | *2×200* | _____ | _____ | _____ |
| **Regular Penalties** | | | | |
| Not making eye-contact when taking an order (per order). | *2×–100* | _____ | _____ | _____ |
| **Deus ex Machina Penalties** | | | | |
| Being guided to a table (per order). | *2×–200* | _____ | _____ | _____ |
| Bypassing manipulation (per object). | *6×–100* | _____ | _____ | _____ |
| Each object handover (per object). | *6×–50* | _____ | _____ | _____ |
| Being told/pointed where is a table/*Kitchen-bar* (per order). | *2×–25* | _____ | _____ | _____ |
| **Special Penalties & Bonuses** | | | | |
| Not attending | *–500* | _____ | _____ | _____ |
| Using alternative start signal | *–100* | _____ | _____ | _____ |
| ***Score per try*** | *2000* | _____ | _____ | _____ |
| **Total Score** | *2200* | _____ | | |

**Remarks:**

# Score Sheet

**Test:**          Smoothie Chef

**Team name:**     _____

**Referee name:**   _____

The maximum time for this test is 10 minutes.

| Action | Score | $1^{st}$ **try** | $2^{nd}$ **try** | $3^{rd}$ **try** |
|---|---|---|---|---|
| ***Main Goal*** | | | | |
| Placing all three fruits in the blender | $3{\times}200$ | _____ | _____ | _____ |
| Pouring a teaspoon of sugar in the blender | *300* | _____ | _____ | _____ |
| Pouring milk in the blender | *300* | _____ | _____ | _____ |
| | | | | |
| ***Bonus Rewards*** | | | | |
| Pouring sugar in the blender without spilling | *400* | _____ | _____ | _____ |
| Pouring milk in the blender without spilling | *400* | _____ | _____ | _____ |
| | | | | |
| ***Regular Penalties*** | | | | |
| Placing an incorrect fruit into the blender | $3{\times}{-}200$ | _____ | _____ | _____ |
| | | | | |
| ***Deus Ex Machina Penalties*** | | | | |
| Starting the test in front of the kitchen counter | *–150* | _____ | _____ | _____ |
| Handing an object over to the robot | *–200* | _____ | _____ | _____ |
| Telling the robot which ingredient comes next | *–250* | _____ | _____ | _____ |
| Using a custom operator | *–250* | _____ | _____ | _____ |
| | | | | |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *–500* | _____ | _____ | _____ |
| Using alternative start signal | *–100* | _____ | _____ | _____ |
| | | | | |
| ***Score per try*** | *2000* | _____ | _____ | _____ |
| | | | | |
| **Total Score** | *2200* | _____ | | |

**Remarks:**

_____     _____     _____
*Date & time*                    *Referee*                     *Team leader*

# Score Sheet

**Test:**          Stickler for Rules

**Team name:**     _____

**Referee name:**    _____

**Maximum time**:                                        10 minutes

| Action | Score | $1^{st}$ **try** | $2^{nd}$ **try** | $3^{rd}$ **try** |
|---|---|---|---|---|
| **Regular Rewards** | | | | |
| Identify a guest breaking a house rule (indicating the rule by voice or log). | $4\times100$ | _____ | _____ | _____ |
| Making eye-contact, politely clarify to the guest what action he should take. | $4\times100$ | _____ | _____ | _____ |
| Confirm that the guest is following the rule. | $4\times200$ | _____ | _____ | _____ |
| **Bonus Rewards** | | | | |
| Making eye-contact, politely clarify to the guest what rule is being broken. | $4\times100$ | _____ | _____ | _____ |
| **Regular Penalties** | | | | |
| Approach a guest who is not breaking a rule. | $4\times-100$ | _____ | _____ | _____ |
| **Deus ex Machina Penalties** | | | | |
| A human directs the robot towards a guest who is breaking a rule. | $4\times-100$ | _____ | _____ | _____ |
| A human tells the robot which guest is breaking a rule. | $4\times-100$ | _____ | _____ | _____ |
| **Special Penalties & Bonuses** | | | | |
| Not attending | $-500$ | _____ | _____ | _____ |
| Using alternative start signal | $-100$ | _____ | _____ | _____ |
| *Score per try* | *2000* | _____ | _____ | _____ |
| **Total Score** | *2200* | _____ | | |

**Remarks:**

_____      _____      _____

*Date & time*                    *Referee*                        *Team leader*

# Score Sheet

**Test:**            Where is this

**Team name:**       _____

**Referee name:**    _____

The maximum time for this test is 10 minutes.

| Action | Score | $1^{st}$ **try** | $2^{nd}$ **try** | $3^{rd}$ **try** |
|---|---|---|---|---|
| ***Main Goal*** | | | | |
| Describing and show the requested location accurately | *3×100* | _____ | _____ | _____ |
| Monitoring operator's navigation, intervening when necessary | *3×200* | _____ | _____ | _____ |
| Describing the areas of the *Arena* traversed during navigation | *3×100* | _____ | _____ | _____ |
| ***Bonus rewards*** | | | | |
| Leading non-expert operator | *3×100* | _____ | _____ | _____ |
| Giving instructions to returning operator based on previous instructions | *300* | _____ | _____ | _____ |
| Natural interaction while guiding | *200* | _____ | _____ | _____ |
| ***Deus Ex Machina Penalties*** | | | | |
| Bypassing speech recognition | *3×–50* | _____ | _____ | _____ |
| Helping the robot find the operator | *3×–150* | _____ | _____ | _____ |
| ***Special Penalties & Bonuses*** | | | | |
| Not attending | *–500* | _____ | _____ | _____ |
| Using alternative start signal | *–100* | _____ | _____ | _____ |
| ***Score per try*** | *2000* | _____ | _____ | _____ |
| **Total Score** | *2200* | _____ | | |

**Remarks:**

_____     _____        _____
*Date & time*             *Referee*                   *Team leader*

# Score Sheet

**Test:** Final Demonstration — Jury Evaluation

**Team name:** _____

**Referee name:** _____

## Instructions:

1. Please watch all demonstrations carefully.
2. At the end of the demonstration you may ask questions.
3. After demonstration and questions, please fill in the evaluation sheet below.
4. You may use the space below "Remarks:" to take notes for yourself.
5. Enter your your name ("referee name") on top of the sheet.
6. Sign the form using the "Referee" slot at the bottom.

## Evaluation sheet

| Team | Originality and presentation* (0-10) | Relevance/usefulness to everyday life (0-10) | Elegance of overall demonstration (0-10) | Success of overall demonstration (0-10) |
|---|---|---|---|---|
| Fifth | | | | |
| Fourth | | | | |
| Third | | | | |
| Second | | | | |
| First | | | | |

*\* Story telling is to be rewarded*

**Remarks:**

_____  _____  _____
*Date & time*                          *Referee*                                  *Team leader*

# Score Sheet

**Test:** Final Demonstration — Executive Committee

**Team name:** _____

**Referee name:** _____

## Instructions:

1. Please watch all demonstrations carefully.
2. At the end of the demonstration you may ask questions.
3. After demonstration and questions, please fill in the evaluation sheet below.
4. You may use the space below "Remarks:" to take notes for yourself.
5. Enter your your name ("referee name") on top of the sheet.
6. Sign the form using the "Referee" slot at the bottom.

## Criteria:

- Scientific contribution
- Contribution to @Home
- Relevance for @Home / Novelty of approaches
- Presentation and performance in the finals

## Evaluation sheet

| Team | Efficacy of solution to main objective (0-10) | Elegance of solution to main objective (0-10) | Innovation/contribution of additional tasks (0-10) | Difficulty/Success of overall demonstration (0-10) |
|---|---|---|---|---|
| Fifth | | | | |
| Fourth | | | | |
| Third | | | | |
| Second | | | | |
| First | | | | |

## Remarks:

_____    _____        _____
*Date & time*                          *Referee*                                    *Team leader*