

# RoboCup@Home Education

## ONLINE CHALLENGE 2020

### Online Classroom Standard Platform

## 05 Examples

RoboCup@Home Education | 2020.05.14

**RoboCup@Home**  
**EDUCATION**

— SoftBank  
Robotics

# Online Challenge 2020: Online Classroom SP

## 05 Examples

Speakers: Luca locchi, Jeffrey Tan, SoftBank Robotics

Time: **May 14, 2020 (Thu) 19:00 - 20:00 (GMT+8)**

Zoom: <https://cernet.zoom.com.cn/j/61764202544> (ID: 617 6420 2544)

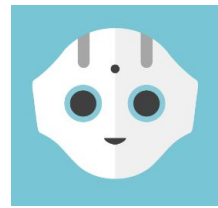
PW: robocup

Online Classroom:

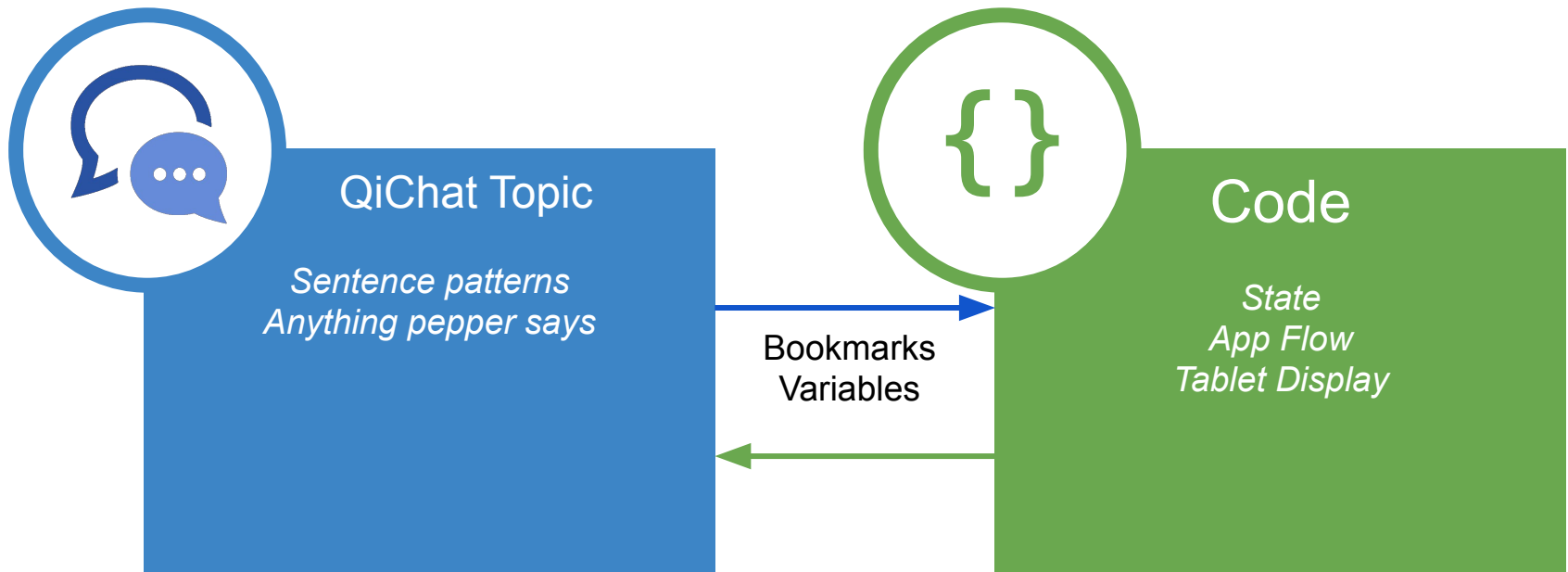
<https://www.robocupathomeedu.org/learn/online-classroom/online-challenge-2020>

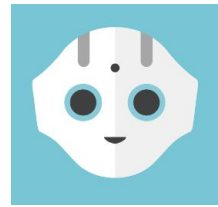
\*\* Privacy reminder: Video will be recorded and published online.

# Interaction between Chat and Actions



How to combine chat interaction and robot actions





# Chat variables

*// Set up a listener for a chat variable*

```
QiChatVariable nameVariable = qiChatbot.variable("Name");
```

```
nameVariable.addOnValueChangedListener(  
    currentValue -> {  
        Log.i(TAG, "Chat var Name: " + currentValue);  
        runOnUiThread(() -> {  
            textView.setText("Hello " + currentValue);  
        });  
    }  
);
```

*// Get/Set the value of a chat variable*

```
String value = nameVariable.getValue();  
nameVariable.setValue("value");
```



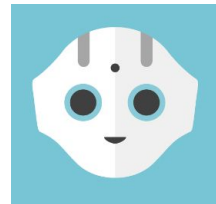
# Chat bookmarks

**proposal:** How are you?

**u1:(~feel-good)** Great. **%feelgood**

**u1:(~feel-bad)** Oh. I am sorry. **%feelbad**

```
qiChatbot.addOnBookmarkReachedListener((bookmark) -> {  
    if (bookmark.getName().equals("feelgood")) {  
        ...  
    }  
    else if (bookmark.getName().equals("feelbad")) {  
        ...  
    }  
});
```

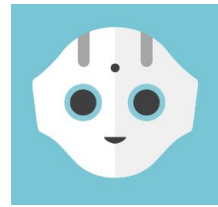


# Chat bookmarks

**anim1Action** = AnimateBuilder...

**anim2Action** = AnimateBuilder...

```
qiChatbot.addOnBookmarkReachedListener((bookmark) -> {  
    if (bookmark.getName().equals("feelgood")) {  
        anim1Action.async().run();  
    }  
    else if (bookmark.getName().equals("feelbad")) {  
        anim2Action.async().run();  
    }  
});
```



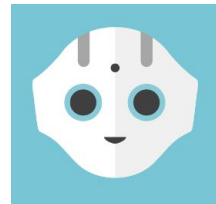
# Other GUI resources

Show images on the Tablet GUI

(use Android Studio to load images and design the layout)

**<ImageView**

```
android:id="@+id/imageView1"  
android:layout_width="wrap_content"  
android:layout_height="wrap_content"  
android:contentDescription="Logo"  
app:layout_constraintBottom_toBottomOf="parent"  
app:layout_constraintEnd_toEndOf="parent"  
app:layout_constraintStart_toStartOf="parent"  
app:srcCompat="@drawable/sapienza" />
```



# Actions to modify tablet GUI elements

```
textView = (TextView)findViewById(R.id.textView1);
```

```
imageView = (ImageView)findViewById(R.id.imageView1);
```

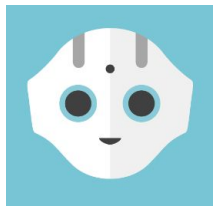
```
runOnUiThread(() -> {  
    textView.setText(val);  
});
```

```
runOnUiThread(() -> {  
    imageView.setImageResource(R.drawable.coke);  
});
```

```
runOnUiThread(() -> {  
    imageView.setImageResource(R.drawable.wine);  
});
```



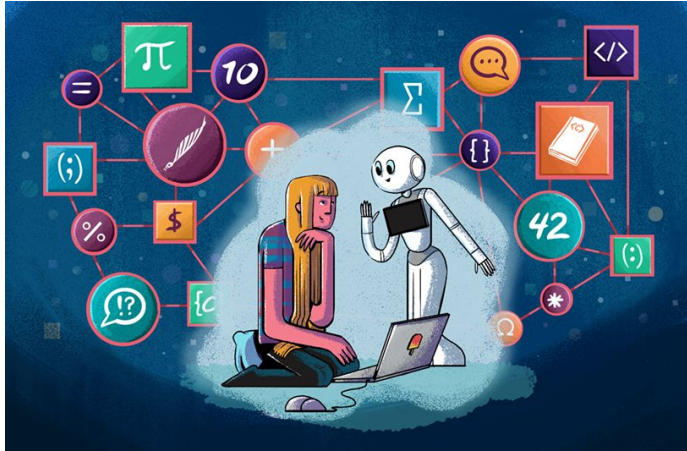
# Shoes Store Retail Example



<https://youtu.be/OosRJS8Px5c>



# Documentation on QiChat



## “Linking QiChat And Code” lesson

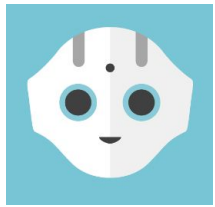
[developer.softbankrobotics.com/pepper-qisdsk/lessons/linking-qichat-and-code](https://developer.softbankrobotics.com/pepper-qisdsk/lessons/linking-qichat-and-code)

Covers many of the ways of calling code from QiChat, or QiChat from code (with examples in Kotlin, not in Java).

Many more QiChat resources on:

[developer.softbankrobotics.com/listing/tags/pepper-qisdsk/50](https://developer.softbankrobotics.com/listing/tags/pepper-qisdsk/50)

# Sample code repositories



<https://github.com/robocupathomeedu/rc-home-edu-learn-pepper>

RoboCup@Home Education teaching material for Pepper 2.9 Android SDK course

<https://github.com/aldebaran/qisdk-tutorials>

QiSDK Tutorials is an Android application for Pepper the robot.

Developed using the QiSDK <https://developer.softbankrobotics.com/pepper-qisdk/>

This application provides an easy access to the tutorial sample codes.

# Assignment 3



Continue the development of your project (using the github classroom assignment).

Add features specific of your chosen demo application (actions, dialogues, GUI elements, etc.)

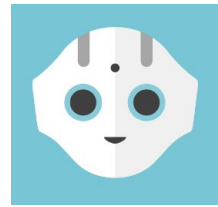
# How to deliver



Push on github

How to to use github from android studio example

<https://medium.com/code-yoga/how-to-link-android-studio-with-github-312037a13b99>



# Example README.md

This README.md file needs to be adapted

To be pushed at the root level of the app assignment on github

```
README.md x
# Project_name

Short project description of the project

## Interaction with Pepper

What can we say to Pepper. Please detail the dialog flow

Example :
1. Launch the application
2. wait for the blue bar to appear or describe how to start the dialog (touch tablet or stand in front of the robot)
3. Dialog flow example
(human) hello pepper
(robot) nice to meet you. Do you want to hear a song or see some pictures ?
(human) show me some photos
(robot) look at that amazing view of the Alps
...
4. how to stop the interaction

Other sentences that you could say:
- can you repeat please
- bye bye

## Contributors

* name of the team
* team leader name and contact
* members of the team

## Miscellaneous
This project is part of RoboCup@Home Education for Pepper 2.9 Android SDK course
```



# Next lectures

01 Introduction

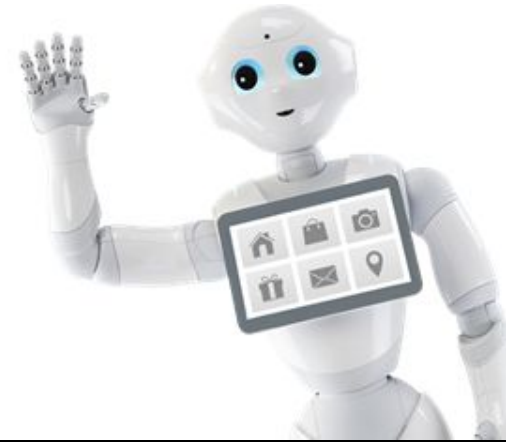
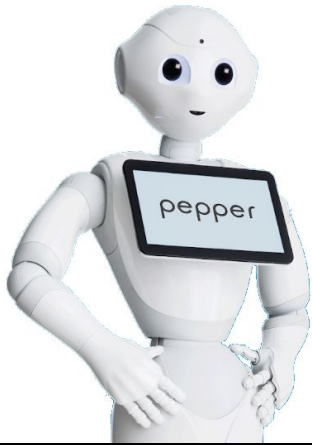
02 Pepper and Software Installation

03 Apps Programming

04 Dialogues

05 Examples

**06 Advanced Programming**



# RoboCup@Home Education

## ONLINE CHALLENGE 2020

### Online Classroom Standard Platform

Web: <https://www.robocupathomeedu.org/challenges/robocuphome-education-online-challenge-2020>

Online Classroom: <https://www.robocupathomeedu.org/learn/online-classroom/online-challenge-2020>

Online Entry Form: <https://forms.gle/UBREeC1xTCVQ9wr78>

Online Entry Form (backup): <https://www.wjx.cn/jq/72082120.aspx>

Contact: [oc@robocupathomeedu.org](mailto:oc@robocupathomeedu.org)

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