1. playVideo(player)
2. pauseVideo(player)
3. loadVideo(player,videoId)
4. cueVideo(player,videoId)
5. loadPlaylist(player,playlistId,index) //playlistId can be either array of video Ids or string of a playlist Id
6. showCurrentTime(player,span)
7. twoDigit(num)
8. var timers=new Array();//one array for one player  
   eventsGivenTime(player,timers,videoId, [  
    { time: 5, funct: function () { } },

{ time: 8, funct: function (){ } },

{ time: 15, funct:function (){ } }

]);

1. timeBarSetUp(slider, video)
2. changeTime(player,value,max,spanDisplayTime)
3. eventForIrregularImg(canva, imgSrc, mouseEvent, funct)
4. sliderBarMode(event,div,actionDrag,actionEnd,axis)
   1. event target can be anything, but it’s always element with class :“handle” dragged in div.
   2. need to assign dynamic position to div(position:relative, position:absolute…etc)
   3. If axis===”y”, it behaves like vertical bar, otherwise horizontal bar.
   4. function actionDrag(value, max, cleardrag){}
      1. use “cleardrag();” when you want to cleardrag when without mouseup. It is used in progressBarAndTimeSpanSetUp(player,div,timeSpan).
   5. function actionEnd(value, max){}
5. clickOnSliderBar(event,div,actionClick,axis)
   1. event target is the bar
   2. need to assign dynamic position to div(event target)(position:relative, position:absolute…etc)
   3. function actionClick(value,max){}
6. mouseEnterSliderBar(event,actionHover,acionLeave,actionEnter)
   1. event target is the bar
   2. need to assign dynamic position to div(event target) (position:relative, position:absolute…etc)
7. updateSliderBarPosition(value, max, div,axis)
   1. update slider bar according to value and max
   2. need to assign dynamic position to div(position:relative, position:absolute…etc)
8. findDocumentCoords(mouseEvent)
9. mouseCoordsToElem(div,mouseEvent)
10. showThumbNail(videoID,div)
11. videoInfo(videoid,funct)//need google API key
12. playlistInfo(playlistId,funct)//need google API key
13. fullScreen(playerDivId)
14. setList()
    1. setList({

valueArray: trackList.code,

nameArray: trackList.name,

listDiv: divId,

actionNull:function(){},

actionExist:function(){},

actionChange: function(selectedListItem,value){}

});

* 1. two different kind of track list
     1. <select id=" divId ">

<option class="sampleNode nameSpan" style="display:block;">select language</option>

</select>

* + 1. <div id=' divId ' style="display:inline-block; max-height:8em; overflow-y:scroll;">

<p class=”sampleNode”><input type="radio" style="display:none;"><label style="font-size:0.8em; line-height:100%; display:none;" class=" nameSpan "></label></p>

* 1. need to set up a not displayed section in htm, which className is “sampleNode”, with dissidents of class:nameSpan
  2. used In setTracklist and setPlaybackRateList

1. getTrack(player,callback)
   1. callback( {value: languageCode[], name: languageName[]})
2. setListForVideoAsync(player,div,defaultValue,essentialFunct,styling)
   1. Full format(use return in actionSetUp):

setListForVideo (player1, tracks2, ‘en’,

{

actionSetUp: function (player,wrapper) { asyncFunct(player,wrapper/\*callback\*/); },

actionChange: function (player, value) { },

actionNull:function(){ },//styling when the list exists or not

actionExist:function(){ }

},

{

stylingFunct:[

{ event: "mouseenter", funct: function (event) { } },

{ event: "mouseleave", funct: function (event) { } }

],

styleSelected: function(item\_to\_be\_styled) { },

styleUnselected: function(item\_to\_be\_styled) { }

}

);

* 1. Use async function(ex:getTrack) in actionSetUp:

In getTrack, callback must have input:{ value:array, name:array }

setListForVideo (player1, tracks2, ‘en’,

{

actionSetUp: function (player,wraper) { getTrack(player,wraper);},

actionChange: function (player, value) { }

});

* 1. Reload “on state change “and “video changed”
  2. need to set up a not displayed section in htm, which className is “sampleNode”, with dissidents of class:nameSpan
  3. defaultValue doesn’t do anything. It has to be the same as youtube default to make sense.
  4. two different kind of track list(see setList())
  5. For input object styling, better using css styling
  6. In stylingFunct, event.target is label or list item
  7. In stylingFunct, can specify arbitrary events(mousemove, click, mouseenter,…etc) for arbitrary times.
  8. In styleSelected, item\_to\_be\_styled is either checked label or the selected list item.
  9. In styleUnselected, item\_to\_be\_styled is either unchecked label or the unselected list items.
  10. Example: caption language  
       setListForVideoAsync(player1, v.tracklist, 'en',

{

actionSetUp: function (player, wrap) { getTrack(player, wrap); },

actionChange: function (player, value) {

player.setOption("captions", "track", { "languageCode": value });

player.setOption("cc", "track", { "languageCode": value });

v.showLan.innerHTML = " ▾ " + document.getElementById("tracklist\_" + value).nextElementSibling.innerHTML;

v.tracklist.style.display = "none";

},

actionNull: function () { v.tracklistNow.parentNode.style.display = "none"; },

actionExist: function () { v.tracklistNow.parentNode.style.display = "block"; }

});

1. setListForVideoSync(player,div,defaultValue,essentialFunct,styling)
   1. Full format(use return in actionSetUp):

setListForVideo (player1, tracks2, ‘en’,

{

actionSetUp: function (player) { return { value: valueArray, name: nameArray }; },

actionChange: function (player, value) { },

actionNull:function(){ },//styling when the list exists or not

actionExist:function(){ }

},

{

stylingFunct:[

{ event: "mouseenter", funct: function (event) { } },

{ event: "mouseleave", funct: function (event) { } }

],

styleSelected: function(item\_to\_be\_styled) { },

styleUnselected: function(item\_to\_be\_styled) { }

}

);

* 1. Auto check if video Id or list length is changed on player state change to decide if reload the list.
  2. Example: PlayBackRate:

setListForVideoSync(player1, v.ratelist, 1,

{

actionSetUp: getSpeed,

actionChange: function (player, value) { player.setPlaybackRate(value); v},

actionNull: function () { v.ratelistNow.parentNode.style.display = "none"; },

actionExist: function () { v.ratelistNow.parentNode.style.display = "block"; }

});

function getSpeed(player) {

var speed = player.getAvailablePlaybackRates();

var name = new Array();

for (var i = 0; i < speed.length; i++) {

name.push(speed[i].toString());

if (speed[i] == 1) name[i] = "normal";

}

return { value: speed, name: name };

}

* 1. Example: Quality(not recommended, not entirely correct):

setListForVideo(player1, v.qualityList1, 'auto', //!!!!!!!!!!!not working well because of API's setPlaybackQuality

{

actionSetUp: function (player) { var qualities = player.getAvailableQualityLevels(); /\*only has value when event=1 or 2\*/return { value: qualities, name: qualities }; },

actionChange: changeQuality

});

function changeQuality(player, value) {

player.setPlaybackQuality(value); /\*it's only suggesting quality. youtube wil determine the actual quality by network quality\*/

}

1. ccon(player,trackList)
2. ccoff(player)
3. getQueryVariable(url,variable)
   1. Ex: get video id: getQueryVariable(player.getVideoUrl(),'v')
4. setUpPlaylist({})
   1. setUpPlaylist({

player: player1,

playlistId: 'PLiatqssGebieEqJ\_Nx5FQ1CUDe-fybMOw', //Use playlistId, Max 50 items

div: playlist1,

actionClick: function (event, index, itemDiv) { },

actionEnter: function (event, index, itemDiv) { },

actionLeave: function (event, index, itemDiv) { },

styleNowPlaying: function(event, nowPlayingDiv){ },

styleNotPlaying: function(event, notPlayingDiv){ }

});

* 1. Need to set up a not displayed section in htm, which className is “sampleNode”.
  2. playlistId can be either array of videoIds or a youtube playlistId.  
     If using youtube playlist id, max 50 items
  3. need to set up a not displayed section in htm, with dissidents of class:title,channelTitle,thumbnail

1. progressBarAndTimeSpanSetUp(player,div,timeSpan)
   1. class: handle, hoverTimeBlock, hoverTimeText
   2. need to assign dynamic position to div(position:relative, position:absolute…etc)