* **SELECTING AVATAR:**
  + Make sure the characters are mecanim compatible and have blend shapes.
  + We recommend the asset store, but there are also other sites, like turbo squid:
  + Should be rigged and have blend shapes (morph)
* **Human animation is mostly skeletal movement**
* **For the 3d character:**
  + Select🡪Rig🡪 Animation type = humanoid
  + Download MCS male from asset store
    - Install core.unitypackage inside the imported asset
    - Drag and drop the contents from content folder inside the imported asset to the content packs of m3dmales in hierarchy
  + Add animation in asset
    - Set animation type to humanoid
    - In asset 🡪 create animator controller
    - Drag and drop the animation in the state machine (the created animator controller 🡪 MaleCharacterController)
    - M3dMale🡪 animator🡪 controller🡪 MaleCharacterController
  + Jaw problem fix:
    - Click on m3dmale
    - Configure avatar
    - Jaw = none
  + Lot of free animations in mixamo.com
  + Character asset in unity is 1st person and 3rd person so be sure to use it
* **Transition between animations:**
  + In controller, parameter controls transition
    - Add float parameter named Talking time to know how long the player has been talking
    - Add float parameter named silenceTime to know how long the player has been silent
  + In idle:
    - Uncheck has exit time box
    - Add parameter called talking time and set to 0.3
  + In listening:
    - Uncheck has exit time box
    - Add parameter called silence time and set to 4
* **Speech Interaction**
  + **Download the unitypackage from the course link**
  + Add micInput script from the unityPackage
  + MicInput-> threshold🡪 0.002 (small sound that will be perceived as talking)
  + Talking time parameter 🡪 TalkingTime
  + Silent Time parameter 🡪 SilentTime
  + In the animator:
    - Talking 🡪 add behavior🡪 play audio script
    - Then add audio clip in audio to play
* **Gesture interaction:**
  + Add noddetector script to the 3d character
  + Add camera to the head parameter
  + Set threshold to 0.3
  + In animator:
    - Add nod parameter
    - Add shake parameter
    - Click on second listening animation:
      * Click on Listening 0🡪 Dying
        + Uncheck hasExit Time
        + Set condition to shake
      * Click on Listing0🡪 rallying
        + Uncheck hasExitTime
        + Set condition to nod
    - Click on dying animation:
      * Add behavior🡪play audio
    - Click on rally animation:
      * Add behavior🡪play audio
* **Face animation:** 
  + Created by muscle movement and jaw bone
  + Create layer in the animator window.
    - Click on settings:
      * Tick on IKpass
      * Sync 🡪 body
    - Put face layer in top row
  + In animation window:
    - Datafiles🡪animation🡪Create animation🡪FaceIdle
      * Drage and drop the FaceIdle to idle animation in face layer
    - Since body idle is 30 sample , face idle must be 30 sample(frames/s)
    - Body preview is 980 frameso in the box of face must be 980 frames
    - Activate morphs in the m3d male game object which will be shown in
      * M3dmakle🡪m3dmale🡪m3dlod\_0🡪skinnedmeshrenderer🡪blendshapes
    - Add property🡪 m3dmale🡪m3dmale\_lod0🡪blend eye (tick in the m3dmale morph hierarchy)
    - Set frames to 980 and add keyframe.
      * Add keyframes in between and set the eyes closed to 100%
      * Copy and paste to different frames
    - Similarly, add any morph to the character
  + In animator:
    - Set weight to 1 for both body and face.
    - Face layer should be top of body layer
    - remove all animation event if they are empty
* **GAZE interaction:**
  + Add lookAt script in the m3dmale
    - Add main camera to the look at target
    - Add leye to the eye
  + Attaching the script makes character look at the camera most of the time
    - Asset🡪datafiles🡪Animation🡪Body🡪IdleNeutral 🡪 Curve:
      * Add lookAtTime 🡪 3
      * Add lookAwayTime🡪 9
      * Similar for other animations based on the time you want them to look at you
    - Go to animator window🡪 parameter
      * Add LookAtTime
      * Add LookAwayTime
  + We can also add an event when the animation starts
    - In listening:
      * Add event
      * The function name “LookAtPlayer” (exists in LookAt script)

**BASIC GESTURE MOTION – ASSET STORE**