BayMax Software Hardware Integration

Sunday, 1 December 2024 9:13 PM

Arduino –

Functions →

Hand functions →

Relbow ()
R wrist ()
R shoulder ()
L wrist ()
L shoulder ()

Same for all of them.

→ They take up or down movement with inbuilt logic.

Head functions →

Rotate () [Param. n for activation and deactivation]
Look () [Min rotation value is presetted]

Medical tray functions →

open tray () [motor no. as param]

Spray →

spray trig ()

Raspberry Pi →

Python script structure

```
While (True):
  n = input (STT)
    if ["Activation words"] in n:
      Scan for user ()
```

→

```
Scan for user() :
  img = Camera on ()
  y = false
  while (!y):
    move head up ()
      y = faced etection API ()
```

→ move head by one degree

```
Move hand () → trig  R elbow ()
Respond ()
move hand () → trig  R elbow ()
y = input (What should I help you with?)
Switch Case () :
  Case 1 :
    Medical support ()
    break
  Case 2 :
    Scans ()
    break
  Case 3:
    emotional Wellbeing ()
    break
  Case 4
    Bruise()
    break :
  default :
    maybe something ()
```

Respond () → Respond () [takes param n for speaking the string n through the speaker]

– Speaker
Wait for input using (STT)

Medical Support ()

```
n = input ("what troubling u?") [STT]
y = n
while ( ["deactivation words"] ! in y)
  response = llama api ()
      Respond ( Response)
  if ["med we have names"] in Response :
      Recomend med ()
      y = input ("")
  if ["deactivation words"] in y :
      Respond ( bye )
  else :
  y = input (" ")
```

→

```
Switch Case ()
  Case ( med name ):
      Pin High ()
  Case ( med name ):
      Pin High ()
  Case ( med name ):
      Pin high ()
```

Scans ()

```
Page change ( ) → choose scan type
n = input ( STT)
Switch case :
  Case 1
  Case 2
  Case 3
```

custom API for each case but same code format → [Page number]

```
Page change Api ()
n = " "
Result ()
Respond (Result)
Page chang Api ()
y = input ( STT)
if ['Deactivation words'] in y :
    Respond (thank you)
    Bacans
```

(Result from Api)

(Activate)

Bruise ()

move arm () → Arm trig

TTS (Hurt arm)

Spray () – spray trig

Pin high functions

Emotional wellbeing ()

```
y = input (STT)
while ("Deactivation words") ! in y:
    emo API (y)
    y = input (STT)
```

→ API for emotional well being