FlowChart Manipulation Place

START

mode == place

Check last Pos & move arm tray_top

Move arm tray_top1/2/3

Move arm tray_1/2/3

Gripper close

Move arm tray_top1/2/3

Move arm tray_top

task == WS

Move arm scan_mid

Task == container

SwotManipulation: PLACE Task

request:
string:= mode "PLACE"
  -> Pick object from tray and place them on workstation
string:= object --- empty

string:= save "SAVE_1, SAVE_2, SAVE_3"
  -> Identifier of tray (safespots)

string:=task "target"
  -> i.e. Container RED/BLUE, MOTOR_H, SH

response:
string:=status "FINSIHED, FAILED"
  -> FINSIHED, Succesfull placed
  -> FAILED, placement failed

task == SH

task == TT

task == PP

SH:
Exact same procedure as WS, only with different scan and pick positions

Get YOLO msg
Get "best" YOLO BBox

Get BBox With ID

Move arm scan_left

Get YOLO msg
Get "best" YOLO BBox

Get BBox With ID

Move arm scan_right

Get YOLO msg
Get "best" YOLO BBox

Get BBox With ID

Return "FAILED"

Scan WS for Free spot

Found free spot

Move arm scan_left

Scan WS for Free spot

Found free spot

Move arm scan_right

Scan WS for Free spot

Found free spot

Return "FAILED"

Send BBox & ID to Object Matching

Get Place Pos from Object Matching

Cont is mid?

Cont is left?

Cont is right?

Move arm pick_mid

Move arm pick_left

Move arm pick_right

Spot is mid?

Spot is left?

Spot is right?

Move arm pick_mid

Move arm pick_left

Move arm pick_right

(cartesian)

Move arm 15cm
Direct over grasp point

(cartesian)

Move arm to grasp point

What is if the object is standing?

Open Gripper

Until force feedback is high than stop or final position reached

Move arm 10cm
Direct over grasp point

Move arm pick_mid/right/left

Move arm scan_mid