

Pseudo Code:

Private Variable: CompressionDepth, compressionCount=0

Slot -> handleOnButton()

- 1) Battery -> getBattery() ->
 - a) if the battery is sufficient for 3 shocks
 - Print on console(All tests[Refer: Use-Case-2])
 - display("UNIT OK")
 - Turn the tick signal to green
 - Else:
 - display("UNIT FAILED: CHANGE BATTERIES")
 - Turn the tick signal to red
- 2) If CheckBox(Pads Attached) is not checked:
 - display("STAY CALM")
 - display("CHECK RESPONSIVENESS")
 - display("CALL FOR HELP")
 - display("USE PASS")
 - display("CHECK BREATHING")
 - display("ATTACH DEFIB PADS")
- Else:
 - Print("PADS ATTACHED")

Slot -> attachPads()

- a) activePads = the value of the selected Pads from the dropdown
 - i) display("ADULT/PEDIATRIC PADS")
- 3) setShockValues() [AED class]
 - If Adult Pads:
 - Shock1= ,120J Shock2=150J , Shock3=200J
 - If Pediatric Pads:
 - Shock1= 50J, Shock2= 70J, Shock3= 85J
- 4) display("DON'T TOUCH THE PATIENT")

Slot -> analyze()

- 5) analyzing() [AED class]
 - display("ANALYZING")
 - getRhythmType() - [Possible Return Values: Sinus, Asystole, VF, VT]
 - If VF or VT:
 - displayECG() corresponding to the rhythm type
 - If getBattery > shock i :
 - display("SHOCK WILL BE DELIVERED IN (THREE) (TWO), (ONE)")
 - Update Shock Display (+1)
 - setBattery(battery - Shock i) -> Battery
 - display("START CPR")
 - Else:
 - display("CHANGE BATTERIES")
 - break
 - Else If Asystole:
 - displayECG() corresponding to the rhythm type
 - print("Non Shockable Rhythm - Asystole")
 - display("START CPR")
 - Else(Sinus):
 - displayECG() corresponding to the rhythm type

- print("Non Shockable Rhythm - Sinus")
- display("PATIENT RECOVERED")
- Break

Slot-> setCompressionDepth()

6) setCompressionDepth():

- Set Value for compressionDepth(Private Var) based on Dropdown Selection
- Print(compressionDepth)

Slot-> checkCompression():

7) checkCompressions() -> AED

- If compressionDepth == "<2 inch" :
 - display("PUSH HARDER")
 - compressionCount += 1
- Else If compressionDepth == "2-2.25 Inch":
 - display("GOOD COMPRESSION")
 - compressionCount += 1
- Else If compressionDepth == "CPR Paused/<0.75 Inch":
 - display("CONTINUE CPR")
- If(compressionCount == 30):
 - compressionCount = 0;
 - display("2 BREATHS")
 - LED CHA-CHING
 - sleep(5s)
 - display("STOP CPR")

Slot-> Power_Off Button

8) handlePowerOff:

- If powered off for >= 5 sec, reset elapsed time.

Tasks;

GUI:

1. Update display widget
2. Add check mark for self test.
3. Remove checkboxes
4. Replace 'Perform CPR' Button with 'Analyze' Button
5. Add Dropdown for Compression Depth - <2 Inch, 2-2.25 Inch, CPR PAUSED/<0.75 Inch
6. Add 'Compression' Button

Flow:

1. Button(Power_On) -> Self Test, Display(If necessary)
2. Dropdown(Pads) -> attachPads()
3. Button(Analyze) -> analyze()
4. DropDown(CompressionDepth) -> setcompressionDepth()
5. Button(Compression) -> checkCompression()
6. Repeat Steps 3 to 5 until End