SOFTWARE ENGINEERING PRINCIPLE

PERSONAL ASSISTANT ROBOT

ASSIGNMENT 1.1 FRED QUESTIONS

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1. What is the concept of the project?
2. What are the features to be involved in it?
3. How many modes of operation to be incorporated?
4. What is the duration of the project?
5. What will the cost of it?
6. How will be the control implemented?
7. Is there any limitation for the components to be used in the project?
8. What type of power supply to be given?
9. Will that be a wired or wireless?
10. Can the robot power supply, be rechargeable?
11. What will be the size of the robot?
12. Where will the robot be made to work? (Indoor or outdoor)
13. What sort of personal assistance to be undertaken by the robot?
14. What will be the load acted on the robot?
15. What should be the speed of the robot?
16. Will the users be able to control the motion of the robot?
17. Will the resources will be provided?
18. How long should the robot's power should last?
19. How frequent the robot will be used?
20. Should it involve all the real actions of the human being?
21. If there a robotic arm available, how many axes should be incurred?
22. What type of end effector or finger of the robot should be used?
23. What should be the holding or lifting torque of the end effector?
24. Should the motion of the arm be pre-programmed or to be let to the commander?
25. Should the end location or the destination of the robot be hard coded or pointed out at the run time?
26. Should the path carried by the robot be pre-programmed or decided at the point of operation?
27. Are we involving the speech back operation to the robot?
28. What are the speech instructions will be given by the robot to the users?
29. Are we controlling the volume of the robot's speech?
30. Will there be a transmitter and a receiver part?
31. Will there be some space available on the robot?
32. What will be the commands to control the robot by the users?
33. Will the robot be portable?

34. What kind of tyres be used for the robot?
35. How is the chassis of the robot being?
36. Are we controlling the robot by the commander's voice?
37. How many commands will be given to the robot via voice?
38. What will be the distance between the robot and the commander?
39. What if the voice recognition system fails?
40. Are we developing a Printed Circuit Board (PCB) for the design?
41. Will the features of the robot be fixed or variable?
42. Are we including the obstacle detection sensors to stop the robot itself, when it is about to hit somewhere?
43. Should the robot be fully automated, by including more sensors?
44. Can the robotic arm be controlled by users or fixed movement only?
45. Are we including the live streaming cameras to see the robot position or operation?
46. Should the streaming have done only in particular device or in server?
47. When we point a destination for the robot to reach, are we telling the robot to come back our self, or it should come back itself after sometime to us where we are?
48. For telling the path to the robot, are we including the line following technique to the project or are we using cameras?
49. If we are using cameras for the image processing, should it be stand still or are we including the pan and tilt mode to make it simple to identify the objects?
50. Should the end destinations of the robot be a fixed number or countless?
51. For recognising the voice commands, the voice recognition modules should be used, so do you need it as a separate part apart from the robot on the hands of the user or it should be placed over the robot only?
52. There will be multiple ways to control the robot, so are we blocking the access of one feature when the other is in the use or all the features of control will be working all the time?
53. What should happen, when the battery running out and the operation still in process?
54. What will happen to the robot if it is moving out of the communication range?
55. How about the designing part, how are we covering the entire portion of the robot and the transmitter?
56. When we done with the development are, we including a special chip (ASIC) into our design to make it work specifically for this particular task or will we be using the same processors for the other purposes or alternatives?
57. What should be the duration or running period of the robot, and the wear and tear?