WASHING MACHINE - GROUP 9 set A

Documentation

For our project we are not using actual machine parts but using assembly language we were able to simulate the interaction and a washing machine's basic functionality.

- This washing machine is an automatic machine which gives the user 2 basic washing options.
- These are light wash and heavy wash.
- Light wash allows the user to wash light clothes for few minutes, using a relatively low water thereby saving the user's precious time and conserving water alongside.
- The heavy wash on the other hand is used when the user wishes to wash heavy clothes, using a water level of 5-6l and an optimum wash time for effective results.
- It is therefore advisable to consider these factors before operating the machine in order maximize its use**.**

CODING

We added macros, **input macro and output macro**, to reduce coding time and code length

We also inculcated the **timeval** structure which is used to put the console to sleep to simulate the processes of washing.
It is comprised of two parts i.e **tv_sec**, **tv_usec**

- The tv_sec member is the elapsed time in whole seconds.
- The tv_usec member represents the rest of the elapsed time in nanoseconds.

The rest of the code is comprised of structures we did in class; **jmp**, **cmp** etc

PSEUDOCODE

1. Display user message “Start Machine “

2. Accept input

3. Compare input to stored yes or no
   If input = yes then start machine
   Else if input = no then turn off machine

4. Display “Warm or Cold water”

5. Accept input

6. Compare input value with stored warm or cold response
   If input = 1 then warm water

7. Display “light or heavy”

8. Accept input
   If input = 1 then display settings for light
   Elseif input = 2 then display settings for heavy
9. Display message “OK?”

10. Accept OKinput
    If OKinput = 1 and Washinput = 1 then JUMP TO Light wash
    Elseif OKinput = 1 and Washinput = 2 then JUMP TO Heavy wash
    Elseif input = 2 then JUMP TO **7.**

11. Display “Done”

12. Ask wash Again

13. Accept Againinput
    If Againinput = 1 then JUMP TO **4.**
    Elseif Againinput = 2 then JUMP TO **14.**

14. Exit program

PROBLEM IN DEVELOPMENT

The main issue with the project was having to learn ways to create the machine. In the early stages of its creation, we planned that we finish the work and try to build the actual machine to use the code we had. But it turned out to be more difficult than we realized. With the deadline soon approaching and the uneven expertise among members we decided to move forward without making the machine physical. Hence this virtual version.

Group members

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