

Question 3:

PAC Chart:

DATA GIVEN	REQUIRED RESULT(S)
<ul style="list-style-type: none">• User's age.• Results for the eyesight, written, and driving tests.• Medical certificate status (for users aged 60 and over).	<ul style="list-style-type: none">• A determination of whether the user is eligible for a license.
REQUIRED PROCESSING	SOLUTION ALTERNATIVE(S)
<ul style="list-style-type: none">• Start by asking for the user's age.• If the user is younger than 18, they are immediately considered ineligible.• Otherwise, check the eyesight exam result. If failed, they are ineligible.• If the eyesight exam was passed, check the written test result. If failed, they are ineligible.• If the written test was passed, check the driving test result. If failed, they are ineligible.• If all tests are passed and the user is under 60, they are considered eligible.• If all tests are passed and the user is 60 or older, a medical certificate is required. If the certificate is available, they are eligible; otherwise, they are ineligible.	<ul style="list-style-type: none">• The results for each test can be stored using characters (e.g., 'P' for pass, 'F' for fail), or boolean values (e.g., true/false or 1/0).• If using characters, both uppercase and lowercase inputs (like 'P' and 'p') should be accepted as valid.

IPO Chart:

INPUT	PROCESS	MODULE REF	OUTPUT
<ul style="list-style-type: none"> User's Age Results for the Eyesight, Written, and Driving Tests Medical Certificate availability (for those over 60) 	<ul style="list-style-type: none"> Ask for and enter the user's age. Check if the user is under 18. If so, they are ineligible. If they are 18 or older, proceed to ask for and enter the eyesight test result. If the result is a fail, they are ineligible. If the eyesight test is passed, ask for and enter the written test result. If the result is a fail, they are ineligible. If the written test is passed, ask for and enter the driving test result. If the result is a fail, they are ineligible. If all tests are passed, check the user's age again. If they are under 60, they are eligible. If they are 60 or older, a medical certificate is required. If the certificate is available, they are eligible; otherwise, they are ineligible. 	<p>INPUT</p> <p>IF-THEN</p> <p>IF THEN</p> <p>IF-THEN</p> <p>IF-THEN</p> <p>IF-THEN</p> <p>IF-THEN</p> <p>IF-THEN</p> <p>IF-ELSE</p>	<p>A final status of "Eligible for license" or "Not eligible for license".</p>

Algorithm:

1. Start by asking the user to provide their age.
2. Evaluate if the age is below 18. If it is, the user is ineligible, and the process concludes.
3. If the user is 18 or older, proceed to inquire about the outcome of their eyesight exam.
4. If the eyesight exam was failed, instruct the user that they'll need a prescription for glasses and that the process ends here.
5. If the eyesight exam was passed, inquire about the status of their written test.
6. If the written test was failed, inform them they must retake it, and the process ends.
7. If the written test was passed, inquire about the status of their driving test.
8. If the driving test was failed, the user is ineligible, and the process ends.
9. If the driving test was passed, check if the user is 60 years old or younger.
10. If the user is under 60, they are eligible, and the process concludes.
11. If the user is 60 or older, inquire if they have a medical certificate.
12. If a medical certificate is provided, the user is eligible; otherwise, they are ineligible.

Pseudo Code:

START

1. PRINT "Enter your age: "
2. INPUT age
3. IF age < 18 THEN
 - PRINT "You are not eligible!"
4. ELSE
 - PRINT "Have you passed or failed your eyesight exam? (P/F)"
5. INPUT eyeTest
6. IF eyeTest = 'F' OR eyeTest = 'f' THEN
 - PRINT "You will need a prescription for glasses!"
7. ELSE
 - PRINT "Have you passed or failed your written test? (P/F)"
8. INPUT writeTest
9. IF writeTest = 'F' OR writeTest = 'f' THEN

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○      PRINT "You must retake the written test!"

10.    ELSE

○      PRINT "Have you passed or failed your driving test? (P/F)"

11.    INPUT driveTest
12.    IF driveTest = 'F' OR driveTest = 'f' THEN

○      PRINT "Sorry, you are not eligible for license!"

13.    ELSE

○      IF age < 60 THEN

○      PRINT "You are eligible for the license!"

14.    ELSE

○      PRINT "Do you have a medical fitness certificate? (Y/N)"
○      INPUT medCert

15.    IF medCert = 'Y' OR medCert = 'y' THEN

○      PRINT "You are eligible for the license!"

16.    ELSE

○      PRINT "Sorry, you are not eligible for license!"
○      ENDIF
○      ENDIF
○      ENDIF
○      ENDIF
○      ENDIF
○      ENDIF

END
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