AUTO REPAIR - -

Last night four people (one of whom was named Jim) went to the Auto shop for various reasons (one had a flat tire), and saw a different mechanic (one was named Willy). From the clues provided can you tell which person had which auto problem and what mechanic he or she saw?

CLUES --

1.] Susan didn't have the oil change, nor did she see mechanic Willy.

2.] Roger who didn't have engine problems or a check up, saw neither Tom nor Sam.

3.] The woman who had the tire change saw either Tom or Adam.

4.] Jim who had a routine check-up didn't see Willy.

5.] Adam performed an oil change for one motorist, who is not Bill

PLAY GAME -

AUTO REPAIR	Tire	Engine	Check-up	Oil	Adam	Sam	Tom	Willy
Bill								
Jim								
Roger								
Susan								
Adam								
Sam								
Tom								
Willy								

(See page 2 for puzzle solution)

NAME	AUTO ISSUE	MECHANIC
Bill	Engine	Willy
Jim	Check-up	Sam
Roger	Oil	Adam
Susan	Tire	Tom

STEP_BY_STEP

Lets look at the first clue "*Susan* **didn't have the *oil change* , nor did she see mechanic named *Willy*.**"
This provides us with two immediate elimination clues: [**Susan-Oil, Susan-Willy**] - fill both with 'red xx'.

•Lets look at the next clue: "*Roger* **who didn't have *engine problems* or a *check up* , saw neither *Tom nor Sam*.**"
This clue simply provides us with several more elimination grid squares :
[**Roger-Engine, Roger-Check,Roger-Sam,Roger-Tom**].
•Lets look at our next clue:"**The *woman* who had the *tire change* , saw either *Tom or Adam*.**"
(Cheeky monkey eh?) The *'woman'* , which allows us to eliminate the grid squares
[**Bill-Tire,Jim-Tire,Roger-Tire**], Why? Because none of these people are women!

Lets now take a moment to update our grid squares as follows :

First locate[**Susan-Tire**] and fill it in with a 'green box'.

Next , for the grid squares [**Susan-Engine, Susan-Check**] choose 'red xx' for both.

Lastly, (Since we now know she ....."*either saw Tom or Adam*"),

we can eliminate the following grid squares:[**Susan-Sam**], as well as [**Sam-Tire, Willy-Tire**].
•Lets proceed to our next clue:"*Jim* **who had a routine *check-up* , didn't see *Willy*.**"Easy enough, locate grid square[**Jim-Check**] and turn it into a'green box',
Then for grid square [**Jim-Willy**] a 'red xx'.

NOTE: *(This clue will also allow us to uncover another),*
To do so : First eliminate [**Bill-Check, Willy-Check**], then look at the *'ENGINE'* column,
(and by using the process of elimination), you will see there is now only one possible (logical) solution here:

'Bill-Engine' ,so go ahead and mark the grid square [**Bill-Engine**] with a 'green box'.

Now, by eliminating the grid square[**Bill-Oil**], reveals yet another solution :
'Roger-OIL'!

Now since we have *'Roger-OIL'*, we can eliminate[**Sam-Oil,Tom-Oil**], by mutual exclusion,

or in other words, they(Sam, Tom) have already been eliminated from Roger's row, they are eliminated from the 'Oil' Column.

Finally, we have our last clue : "***Adam* performed an *oil change* for one motorist, who is *not Bill*.**"Well, since we already know who the motorist is who had the oil change (*'Roger'*- **(see previous clue)**),

Lets fill in grid square [**Roger-Adam**] with a 'green box', then make the (appropriate) eliminations of these grid squares:

[**Roger-Willy, Bill-Adam, Jim-Adam, Susan-Adam**],

which now reveals Susan's mechanic (remember, from clue 3 : "....it was either *'Tom or Adam'*) so that the grid square [**Susan-Tom**] may now be highlighted 'green'.

Doing so results in the elimination of the grid squares: [**Bill-Tom, Jim-Tom**],

which in turn, now reveals our final solution (**by looking at column 'Willy'**), namely,

'Bill-Willy' (again by the process of elimination), and after we add the 'green box' in grid square [**Bill-Willy**], it logically follows that our last combination of motorist-mechanic can only be:

'Jim-Sam'!

(You may fill in the lower grid squares if you like, as an check on the logical eliminations!)

Congratulations! Puzzle solved.

To summarize:

Bill: who had *Engine problems* saw the mechanic named *Willy.*
Jim: who had a routine *Check-up* saw the mechanic named *Sam.*
Roger: who had an *Oil change* saw the mechanic named *Adam.*
Susan: who had a flat *Tire* saw the mechanic named *Tom.*