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 --

(See page 2 for puzzle solution)
**NAME** | **AUTO ISSUE** | **MECHANIC**
---|---|---
Bill | Engine | Willy
Jim | Check-up | Sam
Roger | Oil | Adam
Susan | Tire | Tom

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**STEP_BY_STEP**

Let's 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'.

- Let's 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].
- Let's 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!

Let's 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].

- Let's 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**.