Sustainable Data Science

and Artificial Intelligence

Activity #5

**Instructions**

You have been hired to develop an expert system for a Judicial service, your system will ask the following questions:

* Was the accused found guilty (y/n)?
* Did the accused have extenuating circumstances (y/n)?

And will apply the following rules:

|  |  |  |
| --- | --- | --- |
| **Found**  **Guilty** | **Extenuating**  **Circumstances** | **System**  **Response** |
| **N** | **N** | *You are free to go.* |
| **N** | **Y** | *You are free to go.* |
| **Y** | **N** | *You are sentenced to 5 years.* |
| **Y** | **Y** | *You are sentenced to 2.5 years.* |

Here what I want you to do:

1. Login into ChatGPT, and ask it to write the code to do this in C
2. Run that code in compiler like this one (<https://www.programiz.com/c-programming/online-compiler/>) and see if it works.
3. If it doesn’t work, fix it.
4. If it does work, check if there is anyway you can improve the code. As well as adding in any headers and comments you think would be a good idea.
5. Submit the following:
   1. The Prompt question(s) you gave to ChatGPT
   2. The code it generated
   3. The code you improved
   4. Screengrabs of the code running with inputs NN, NY, YN, and YY.

**Submission Instructions**

Please submit in the following two ways

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| Please e-mail me your completed solution, and with filename:  *Familyname\_FirstName\_TU850\_1\_SDSaAI\_Activity6.docx*  e.g.  *Gordon\_Damian\_TU850\_1\_SDSaAI\_Activity6.docx*  Also include the answer to Activity #1-5 in separate files.  e-mail to [Damian.X.Gordon@TUDublin.ie](mailto:Damian.X.Gordon@TUDublin.ie) with subject heading as follows:  [DT850/1] SDSaAI Activity #1-6 |
| Please submit into Brightspace in:   * Assessment   + Assignments     - Activity #6 |

For the email, please include the following message:

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| **Damian,**  **I am a student in your Sustainable DS & AI (CMPU1040) class in the BSc in DS & AI (DT850/1).**    **Please find attached Activity #1-6.**  **Regards,**  **Your Name**  **Student Number.**  **DT580, BSc in DS & AI** |