**Task 4**

**ML Problem Types**

**Marks: 20**

**Time: 15 minutes**

This task is based on your real-world understanding and ability to identify what kind of problem it is. Identify the type of ML problem. Mention whether a problem is Classification / Regression / Clustering / Association / Reinforcement type.

**List the type of problem for the problems you specified in Task3 for the following domains**

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| **S.No** | **Healthcare** | **Type** |
| **1** | **Diagnosing cancer using medical imaging** | **Classification** |
| **2** | **Prediction of disease given symptoms** | **Regression** |
| **3** | **Treatment Plan** | **Association** |
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| **S.No** | **Education** | **Type** |
| **1** | **School schedule** | **Clustering** |
| **2** | **Automated grading** | **Classification** |
| **3** | **Learning recommendations** | **Association** |
| **4** | **Detecting cheating in online exams** | **Classification** |
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| **S.No** | **Banking** | **Type** |
| **1** | **Fraud detection** | **Classification** |
| **2** | **Credit score and loan eligibility** | **Classification** |
| **3** | **Customer churn** | **Classification** |
| **4** | **Market trend and analysis** | **Regression** |
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| **S.No** | **E-Commerce** | **Type** |
| **1** | **Product recommendation based on purchase history of the customer** | **Association** |
| **2** | **Association of products that go together** | **Association** |
| **3** | **Automated customer service** | **Reinforcement Learning** |
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| **S.No** | **Your Problems** | **Type** |
| **1** | **Price a car based on features like color, year, etc.** | **Regression** |
| **2** | **Create a meal plan based on dietary restrictions/preference, health goals, and available ingredients** | **Association** |
| **3** | **Create a gym workout plan based on fitness goals, experience level** | **Association** |
| **4** | **Predict the winner of a certain game based on past results and active squad** | **Classification** |
| **5** | **Crypto trade alerts, based on past trends** | **Regression** |