**Assignment 1**

A student has a mixture containing glucose, fructose, and sucrose. Which chromatographic technique would you recommend for separation? Justify your choice.

**Assignment 2**

Why is **polarity** important in choosing the mobile and stationary phases in chromatography? Support your answer with an example.

**Assignment 3**

You attempted to separate two polar drugs using a non-polar mobile phase in column chromatography, but they did not elute well.
**Task:**

* Identify the issue and propose how to optimize the system using polarity principles.
* Suggest appropriate solvents and stationary phases.

**Assignment 4**

**Task:**
Create a polarity index table including at least **8 solvents** commonly used in chromatography (e.g., hexane, methanol, ethyl acetate, acetone).

* Rank them from least to most polar.
* Explain how solvent polarity influences **selectivity** and **elution strength**.