



**— University of Mosul —**  
**College of Petroleum & Mining Engineering**



**“Reservoir modelling and simulation”**

**The components of petroleum reservoir simulation**  
**Lecture ...(3)....**

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### LECTURE CONTENTS

- ☐ Introduction.
- ☐ The main purposes.
- ☐ The major steps involved in the development of a reservoir simulator.
- ☐ How to Build and run a reservoir simulation model.
- ☐ Basic theories of Reservoir Simulation.
- ☐ Transmissibility.

**A petroleum reservoir or oil and gas reservoir: is a subsurface accumulation of hydrocarbons contained in porous or fractured rock formations.**

**The benefits: to optimize development plans for new fields, assist with operational and to investment decisions.**

**To carry out reservoir simulation, it is necessary to perform several and complex studies which are normally made by teams of specialists from different disciplines – due to the large amount of data required for the preparation of the simulation input data set.**