Service Oriented Architectures
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The exam is open book. Please write your name and student number on all pages.

Exercise 1 (20 points)

A new Internet company (*CloseShow*) wants to provide a composite service providing registered users with the list of movies played in cinemas located near their homes. After user log-in, the service will provide a list of movies available in cinemas whose address is at maximum 1km far from the user's address (specified in the registration form).

To identify the nearby cinemas, CloseShow exploits:

(i) A third party movie service (*MovieDB*) that for each cinema of a given city, provides the list of all movies in the playing schedule. Each movie description contains the movie Name and the Running Time, as well as the cinema's Name and Address.

(ii) *Google Maps* to compute the distance between the user address and the cinema's one.

You are in charge of designing the process of CloseShow.

1) Sketch the WSDL interfaces for two SOAP services, one implementing MovieDB and the other wrapping the needed functionalities of Google Maps. Make all necessary assumptions.
2) Show a MovieDB request in SOAP/XML.
3) Sketch the BPEL code for the entire CloseShow orchestration, including an authentication service to retrieve the user address and other services you consider necessary.

Exercise 2 (10 points)

Discuss a possible REST implementation of the process, providing a sample REST interface for MovieDB and supporting user authentication. How would you orchestrate these services into a process?