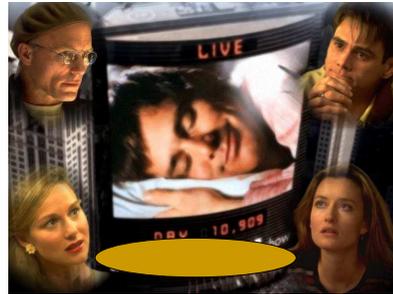


Knowing the limits

Atri Rudra

April 17

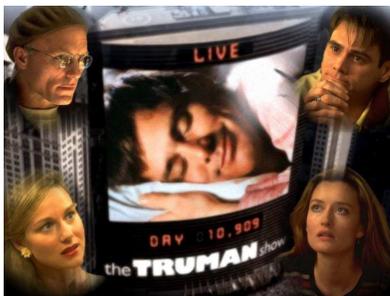
Which movie ?



A. Rudra, CSE322

2

The Truman Show



A. Rudra, CSE322

3

Truman is happy in his life...



A. Rudra, CSE322

4

Till one day...



Screenshot by: Kirk Geiger @ kgeiger.net

A. Rudra, CSE322

5

Say Mr. DFA attends this class



A. Rudra, CSE322

6

But today...



Screenshot by: Kirk Geiger @ kgeiger.net

Today Mr. DFA will find out his limits

- We will study a method to **prove** that a language is not regular
- Enter, the pumping lemma



The general “structure”...

- If **L** is regular **then** some property (call it **P**) is satisfied
- If **L** does not satisfy **P** then **L** is not regular

Contrapositive of an Implication

- If an object is an apple, then it is **red**



The general “structure”...

- If **L** is regular **then** some property (call it **P**) is satisfied
- If **L** does not satisfy **P** then **L** is not regular