



## **GPU Architectures – Password Cracking**

Prof. Dr.-Ing. Sohan Lal

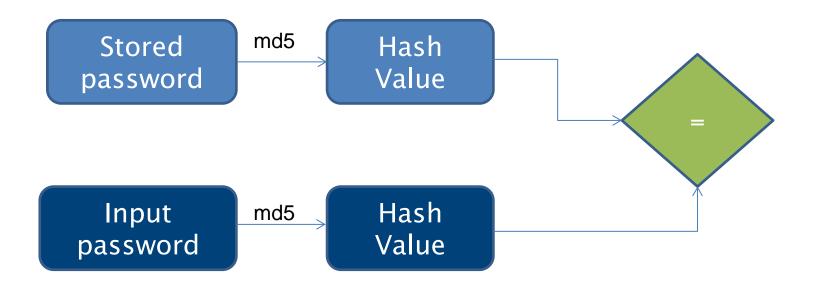
Institute of Massively Parallel Systems
School of Electrical Engineering, Computer Science and Mathematics
Technische Universität Hamburg

TUHH

## **Password Cracking**



- Passwords are stored as hash values
- Checking passwords by checking has values



## **Brute Force Checking**



- Check hash value of every possible combination of N letters
- MD5 calculation is independent for very possible password
- Constrain for the password:
  - > 4 letters
  - Lower case only
  - $\triangleright$  Number of possible passwords: 26  $\times$  26  $\times$  26  $\times$  26
- Example:



The C code file is named as md5.c