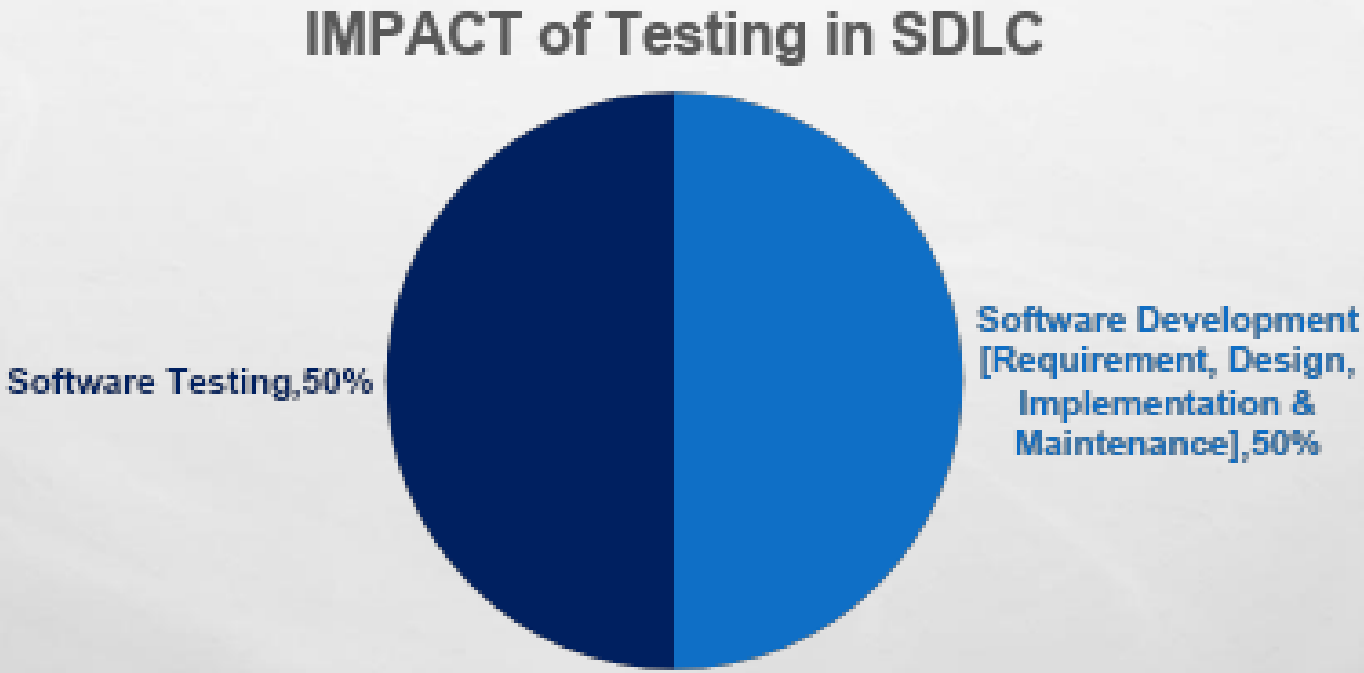
WHY SOFTWARE TESTING

Software Testing

- PROCESS TO IDENTIFY
  - CORRECTNESS,
  - COMPLETENESS,
  - QUALITY OF DEVELOPED SOFTWARE.

- SET OF ACTIVITIES ARE CONDUCTED WITH AN INTENT OF FINDING ERRORS IN SOFTWARE, SO THAT A DEFECT FREE SOFTWARE CAN BE RELEASED TO THE CUSTOMER.
- Verification of Application Under Test (AUT)

IMPORTANCE OF TESTING



- ensures reliability, security and high performance which further results in time saving, cost effectiveness and customer satisfaction.

WHY SOFTWARE TESTING

AIRPLANE CLASH

- APRIL, 1994
- CHINA AIR BUS A300
- AIRPLANE CRASH
- DUE TO SOFTWARE FAILURE
- 264 PEOPLE DEAD

THERAC-25 RADIATION THERAPY FAILURE

- 1985
- THERAC-25 RADIATION THERAPY
- MALFUNCTION DUE TO SOFTWARE BUG
- 3 DEAD & 3 CRITICALLY INJURED

SATELLITE LAUNCH FAILURE

- APRIL, 1999
- MILITARY SATELLITE LAUNCH
- SOFTWARE BUG
- $1.2BILLION LOSS

BANK FUNDS MISTRANSFER

- MAY, 1996
- SOFTWARE BUG
- 823 CUSTOMERS OF US BANK
- CREDITED WITH $920 MILLION

SOFTWARE BUGS CAN BE
EXPENSIVE
& SOME TIMES DANGEROUS
TO HUMAN LIFE

TESTING IS NOT EASY TOO…

TESTING IS NOT EASY TOO…

- NUMBER OF TEST CASES TO BE WRITTEN TO VALIDATE THE PASSWORD

- CONSTRAINTS:
  - CHARACTERS LENGTH – 7
  - 1ST CHARACTER – NUMERIC VALUE
  - 2ND – 7TH CHARACTER – ALPHA NUMERIC

TESTING IS NOT EASY TOO... (CONTD.,)

- 1ST CHARACTER – 10 WAYS

  (DIGITS FROM 0-9)

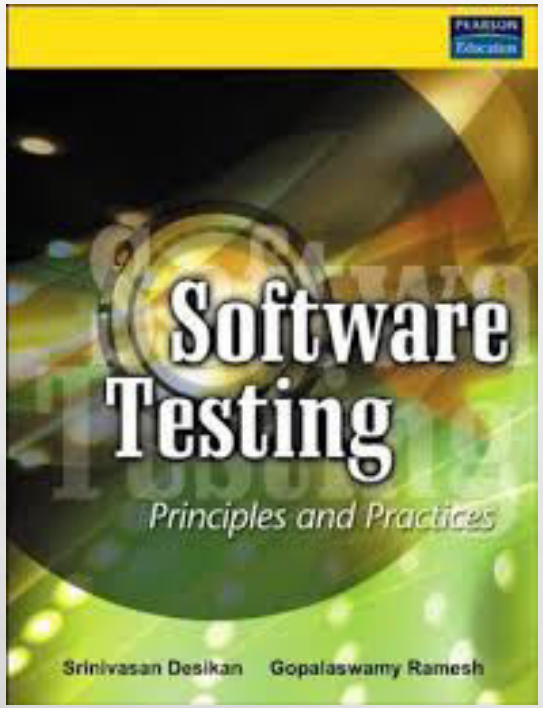
- 2ND – 7TH CHARACTER – 62 COMBINATIONS

  (DIGITS 0-9, ALPHABETS: LOWER CASE a-z, UPPER CASE A-Z)

TESTING IS NOT EASY TOO... (CONTD.,)

- **TOTAL COMBINATIONS FOR ENTIRE PASSWORD**
  - => 10 * 62 * 62 * 62 * 62 * 62 * 62
  - => 5,68,00,23,55,840 TESTCASES
- **IF APPROXIMATELY 10 SECONDS FOR EACH CASE**
  - => 18011 YEARS

REFERENCES



Guru99

Top Software Testing Services Companies

- 1) Testlio
- 2) QA Wolf
- 3) TestMatick
- 4) A1QA
- 5) PFLB
- 6) iBeta Quality Assurance
- 7) Aspire Systems
- 8) Indium
- 9) TestingXperts
- 10) Abstracta