

CSC424 System Administration

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Week 8 Bash Scripting - 3

Exercise 1

- Write a program that gives simple math quizzes. The program should display two random numbers that are to be added. such as
 - 247
 - $+ 129$
- The program should allow the student to enter the answer, If the answer is correct, a message of congratulations should be displayed. If the answer is incorrect, a message showing the correct answer should be displayed.

printf function

- printf function can be used for format control
- Syntax:
- `printf "%w.pL\n" $varName`
- w - Minimum field width.
- p - Display number of digits after the decimal point (precision).
- L - a conversion character. It can be:
 - s - String
 - d - Integer
 - e - Exponential
 - f - Floating point

Exercise 2

- Write a program that generates 100 random numbers and keeps a count of how many of those random numbers are even, and how many of them are odd.

Exercise 3

- Write a program that generates 100 random numbers and write the numbers into a file called "data". Each line contain one number.

Exercise 4

- Write a program to read the numbers from data. Calculate the sum, average, min and max values.

Exercise 5

- Write a program to generate a database contains student records (at least 10 students). Each line contains one student's record. The format of the record is:
 - Name grade_1 grade_2 grade_3 ... grade_10
- Grade: A, B, C, D, F

Exercise 6

- Write a program that reads the student record from database. The program should display each student's GPA. You can assume 3 credits for each course.
- GPA calculation:
 - A: 4.0
 - B: 3.0
 - C: 2.0
 - D: 1.0
 - F: 0.0