

CSE225L – Data Structures and Algorithms Lab
Lab 12
Recursion

1. Write a recursive function that returns the nth Fibonacci number from the Fibonacci series.

```
int fib(int n);
```

2. Write a recursive function to find the factorial of a number.

```
int factorial(int n);
```

3. Write a recursive function that returns the sum of the digits of an integer.

```
int sumOfDigits(int x);
```

4. Write a recursive function that find the minimum element in an array of integers.

```
int findMin(int a[], int size);
```

5. Write a recursive function that converts a decimal number to binary number.

```
int DecToBin(int dec);
```

6. Write a recursive function that find the sum of the following series.

$$1 + 1/2 + 1/4 + 1/8 + \dots + 1/2^n$$