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| **KING SAUD UNIVERSITY**  **COLLEGE OF COMPUTER AND INFORMATION SCIENCES**  **COMPUTER SCIENCE DEPARTMENT** | | |
| **CSC215** | **Lab3**  **C Basics** | **2nd Semester 1436-1437** |

**Program 1:** Write a C program which will take 2 inputs (Base and Exponents) and calculate the power of the exponents from it base value. The program should ask for these 2 inputs and give the results. Please check the results with different no.s for base and exponent.

**Sample run:**

**C:\Users\mzakariah\Dropbox\Teaching\215\Lab 3\Final\Result.PNG**

**Program 2:** Factorial program in C programming using For Loop

The factorial function (symbol: !) means to multiply a series of descending natural numbers.

Ex: 4! = 4\*3\*2\*1 = 24

5! = 5&4\*3\*2\*1 = 120

**Sample run:**

C:\Users\mzakariah\Dropbox\Teaching\215\Lab 3\Final\2\Result.PNG

Name your file using the following naming convention:

* “Lab3\_YourFirstName\_YourLastName.c"
* Don’t forget to move to your own directory
* Compile your code and execute it.
* Show the program to your lab instructor before you leave.

**Answer:**

**Program 1:**

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**C program to find power of any number using for loop**

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#include <stdio.h>

int main()

{

int base, exponent, i, power = 1;

/\*

\* Reads base and exponent from user

\*/

printf("Enter base: ");

scanf("%d", &base);

printf("Enter exponent: ");

scanf("%d", &exponent);

/\*

\* Calculates the Power using the loop and run till the exponent is reached

\*/

for(i=1; i<=exponent; i++)

{

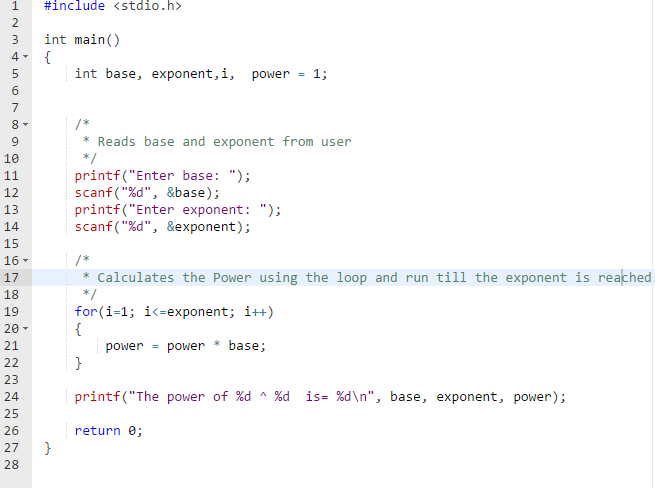
power = power \* base;

}

printf("The power of %d ^ %d is= %d\n", base, exponent, power);

return 0;

}

****

**Program 2:**

#include <stdio.h>

int main()

{

int c, n, fact = 1;

printf("Enter a number to calculate it's factorial :");

scanf("%d", &n);

for (c = 1; c <= n; c++)

fact = fact \* c;

printf("Factorial of number %d! = %d\n", n, fact);

return 0;

}

