Basic Programming Lab

— — 0x02

C Keywords

auto	double	int	struct
break	else	long	switch
case	enum	register	typedef
char	extern	return	union
continue	for	signed	void
do	if	static	while
default	goto	sizeof	volatile
const	float	short	unsigned

C Identifiers

```
#include<stdio.h>

int main()
{
      float Number_1 = 10;
      float Number_2 = 20;
      float Number_3;

      Number_3 = Number_1 + Number_2;
      printf("Sum: %f", Number_3);

      return 0;
}
```

C Arithmetic Operators

Operator	Meaning of Operator
+	addition or unary plus
-	subtraction or unary minus
*	multiplication
/	division
%	remainder after division (modulo division)

scanf() function

```
#include<stdio.h>

int main()
{
	int Number_1;
	int Number_2;
	int Quotient;
	int Remainder;

	printf("\n Print First Number: ");
	scanf("%d", &Number_1);
	printf("\n Print Second Number: ");
	scanf("%d", &Number_2);

	Quotient = Number_1 / Number_2;
	Remainder = Number_1 % Number_2;

	printf("\n Quotient: %d", Quotient);
	printf("\n Remainder: %d", Remainder);

	return 0;
}
```

Data Types in C

Basic Data Type

```
char        -- character type variables
            -- char letter = 'm';

int         -- integer type variables
            -- int number = 73;

float       -- real nos type variable
            -- float Nfactor =  7.3;

double      -- real nos type variable
            -- double Nfactor = 7.3;
```

Derived Data Type

Array, Pointer, Structures ...

Format Specifier

Type	Size (bytes)	Format Specifier
char	1	%c
int	2	%d, %i
float	4	%f
double	8	%lf

Comments in C

Single line Comment

```
// It's good to use comment
```

Multiple line Comment

```
/*
      Practice more
      Programming
*/
```

Assignment

//0x02

1. Write a program to find the **sum, difference multiplication and division** between two float type nos print the output.

Number_1: 567
Number_2: 432

2. Write a program to **convert given paisa** into its equivalent rupee and paisa.

Example: 750 paisa = 7 Rupee and 50 paisa

3. Write a program to **convert given second** into its equivalent hour, minute and second.

Example: 9876 second = 2 Hour, 44 Minute and 36 Second

4. Write a program to **swap** two nos.

Number_1 = 987
Number_2 = 654

After swapping

Number_1 = 654
Number_2 = 987

Sample Assignment

```
/* ------------------------
Name: Manabhanjan Pradhan
Roll no: 518cs1004
-------------------------*/

#include<stdio.h>

int main()
{
        printf("Hello World \n");

        return 0;
}
```

Points to Remember

1. Filetype: .c

2. Naming Convention for Directory: Assignment_X
   where X = Lab No
   example: Assignment_1

3. Naming Convention for File: RollNo_Q_Y.c
   where Y = Question No in that Assignment
   example: 123XXX4567_Q_1.c

Commands:

	Command	Example
Create Directory	mkdir <directory_name>	mkdir test_directory
Create File	vi <filename>	vi test.c
Compile a C Program	gcc <filename>	gcc test.c
Run a C Program	./a.out	