Assignment_Operatos

Answer 1:

a.In arithmetic-logic unit(ALU which is within the CPU),mathematical operations like:addition,substraction,multiplication, and division are done in bit-level.To perform bit-level operations in C programming, bitwise operators are used.They are

Bitwise AND(&),Bitwise OR(|),Bitwise XOR(^),Bitwise complement(~),Bitwise shift left(<<) and shift right(>>).

Syntax: operand1 &(any bitwise operator) operand2

Example:5(Decimal)=00000101(Binary)

4(Decimal)=00000100(Binary)

5 & 4=00000101 & 00000100=00000100=4

Result: 5 & 4=4

b.The conditional operator ?:,also know as the ternary conditional operator evaluates a Boolean expression and returns the result of one of the two expressions,depending on whether the boolean expression evaluates to true or false.

Syntax:variable = (condition) ? expressionTrue : expressionFalse ;

Example: int a = x>y ? printf ("true") : printf ("false") ;

Answer 2:

```
#include <stdio.h>
#include <stdlib.h>
int main()
{
   int num1,num2;
   char ch;
```

```
   puts("Simple Calculator.");
   puts("Enter add press '+' ,for substract press'-',for
multiply press'*',for divide press '/',for reminder press
'%'");
   scanf("%c",&ch);
   puts("Enter any two number.");
   scanf("%d",&num1);
   scanf("%d",&num2);
   int r;
   switch(ch)
   {
      case '+':
         r=num1+num2;
         printf("Sum of %d and %d is %d", num1, num2,r );
         break;
      case '-':
         r=num1-num2;
         printf("Difference of %d and %d is %d", num1,
num2,r );
         break;
      case '*':
         r=num1*num2;
         printf("Product of %d and %d is %d", num1, num2,r
);
         break;
      case '/':
         r=num1/num2;
         printf("Divison of %d and %d is %d", num1, num2,r
);
```

```
        break;
      case '%':
        r=num1%num2;
        printf("Reminder of %d and %d is %d", num1,
num2,r );
        break;
       default:
         printf("Entered a wrong character");
   }
   return 0;
}
```