C Language - Loops

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While Loop

```
while(expression)
{
    statements;

}
```

```
Int a = 0;
while( a<=100)
{
  printf("current value  of a : %d   \n" , a) ;
  a++  ;
}
```

```
do
{
    statements;

} while(expression) ;
```

```
int a = 0 ;
do
{
   printf("current value  of a : %d   \n" , a) ;
  a++  ;

} while(a <= 100) ;
```

For Loop

```
for (expr1; expr2 ; expr3)
{
    statements;
}
```

expr1 and expr3 are assignment operations

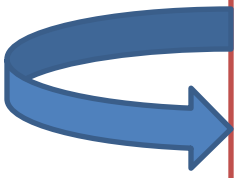
expr2 is a relational expression

Exp1, exp2 and exp3 are optional but ; are mandatory

```
for  (int a = 0;  a <=100 ; a++)
{
   printf("current value  of a : %d  \n" , a) ;
}
```

Break and continue

```
for  (int a = 0;  a <=100 ; a++)
{
   printf("current value  of a : %d  \n" , a) ;
   if (a == 50)
       break ;
}
next statement;
```



```
#include <stdio.h>
int a;
main()
{
        for(a = 0;  a <=100 ; a++)
        {
           if ( a%2 == 1)
              continue ;
            printf("current value  of a : %d  \n",a) ;
        }
}
next statement;
```

Functions

```
#include <stdio.h>

#define sun 1
#define mercury 2
#define venus 3
#define mars 4
#define jupiter 5
#define saturn 6
#define uranus 7
#define neptune 8


//double computeDistance(int);

double computeDistance(int planet_name)
{
        if ( planet_name ==1)
            return 1.00 ;
        else if (planet_name == 2) return 0.61 ;
        else if (planet_name == 3 ) return 0.28 ;
        else if (planet_name ==4 ) return 0.52 ;
        else if (planet_name == 5 ) return 4.2 ;
        else if (planet_name ==6) return 8.54 ;
        else if (planet_name ==7) return 18.14 ;
        else if (planet_name ==8) return 29.06 ;
        else return -1;

}

main()
{
   // 1 AU = 149,598,000 kilometres ; 1 AU is the distance between the Sun and Earth

   double distance = 0.00;

   distance = computeDistance(mercury);
   printf("Distance beteween earth and the planet is  =  %f astronomical unit", distance);
```

return type functionName(argument declarations)
{
*** Declarations, statements***
}

Assignment :

1. Write a function that accepts one parameter (integer)and returns 1 if it is a prime number else return 0
2. Write a program to print all prime numbers between 1 and 100. Use for loop and Continue statement.