**Labsheet-6 (Function)**

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**1.**

#include <stdio.h>

#include <stdlib.h>

int armstrong(int i);

int main()

{

int i,sum=0;

printf("The Armstrong numbers between 1 and 500 are: \n");

for (i=1; i<=500; i++)

{

sum = armstrong(i);

if (i==sum)

{

printf ("%d\n",i);

}

}

return 0;

}

int armstrong(int i)

{

int rem,sum=0;

while(i)

{

rem = i%10;

i /= 10;

sum +=(rem\*rem\*rem);

}

return (sum);

}

**2.**

#include <stdio.h>

#include <stdlib.h>

int gcd(int a, int b);

int main()

{

int x,y, GCD;

printf("Please enter two number: ");

scanf("%d%d",&x,&y);

GCD = gcd(x,y);

printf("Greatest common divisor (GCD): %d",GCD);

return 0;

}

int gcd(int a, int b)

{

if (a==0)

{

return (b);

}

if (b==0)

{

return (a);

}

if (a>b)

{

return gcd(a%b,b);

}

else

{

return gcd(a,b%a);

}

}

**3.**

#include <stdio.h>

#include <stdlib.h>

int lcm(int x, int y);

int main()

{

int x,y,LCM;

printf("Please enter two value: ");

scanf("%d%d",&x,&y);

if (x<y)

{

LCM = lcm(x,y);

}

else

{

LCM= lcm(y,x);

}

printf("Lowest common multiple (LCM): %d",LCM);

return 0;

}

int lcm(int x, int y)

{

static int c=0;

c += x;

if ((c%x==0) && (c%y==0))

{

return (c);

}

else

{

return lcm(x,y);

}

}

**4.**

#include <stdio.h>

#include <stdlib.h>

int fibonacci(int);

int main()

{

int n,i,Fn;

printf("Please enter fibonacci series number (value of n): ");

scanf("%d", &n);

printf("%dth number of fibonacci series is: ",n);

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

{

Fn = fibonacci(i);

printf("%d ", Fn);

}

return 0;

}

int fibonacci(int i)

{

if(i == 1)

{

return(0);

}

else if(i == 2)

{

return(1);

}

else

{

return( fibonacci(i-1) + fibonacci(i-2) );

}

}

**5.**

#include <stdio.h>

#include <stdlib.h>

int sumd(int n);

int main()

{

int n,Sumd;

printf("Please enter a positive number: ");

scanf("%d",&n);

Sumd = sumd(n);

printf("The sum of digits for %d number: %d",n,Sumd);

return 0;

}

int sumd(int n)

{

int a,sum=0;

if (n==0)

{

return (0);

}

else if (n>0)

{

a = n%10;

n /=10;

sum = a+ sumd(n);

}

return (sum);

}