LAB 6

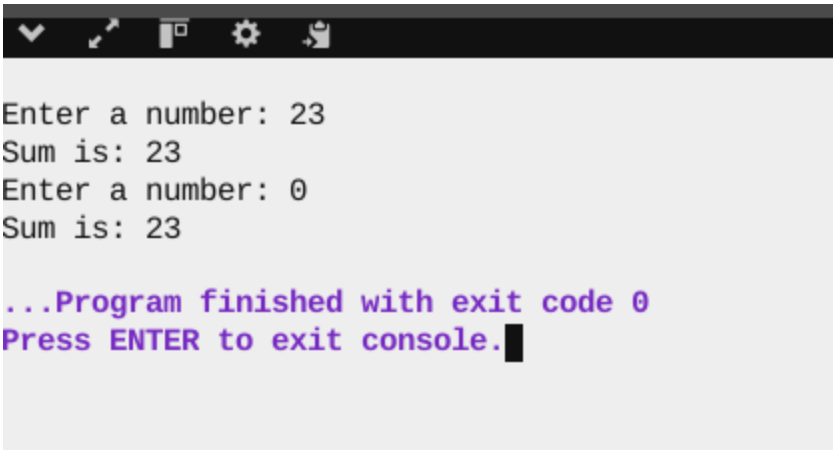
- Problem 1:

We will use do-while loop because the body of do-while will execute at least once no matter if the condition is true or false. So if we want to take user input at least once, we will use do-while loop.

Source code:

```
#include <stdio.h>
int main() {
int num,sum=0;
do
{
   printf("\nEnter a number: ");
   scanf("%d",&num);
   sum=sum+num;
   printf("Sum is: %d",sum);
}
while(num>0);
}
```

Output:



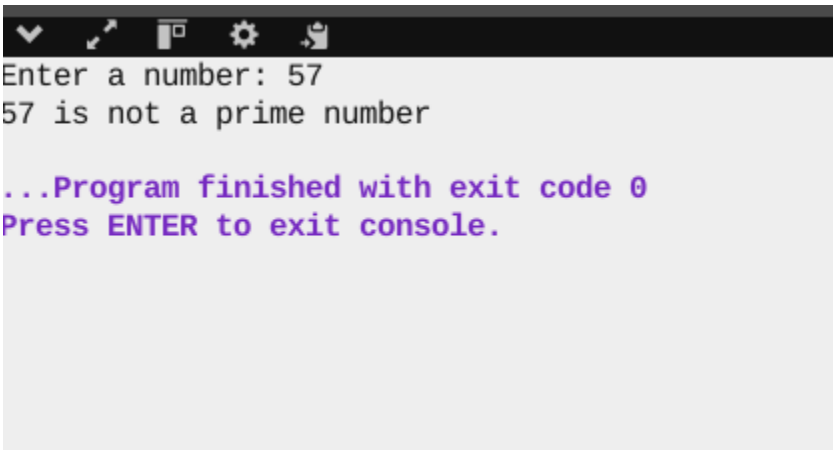
- Problem 2:

Source code:

```
#include <stdio.h>
int main() {
int num,i,flag=0;
printf("Enter a number: ");
scanf("%d",&num);
for (i=2;i<num;i++)
{
   if (num%i==0)
   {
   flag=1;
   break;
   }
}
   if(flag==0)
   printf("%d is a prime number",num);
   else
   printf("%d is not a prime number",num);


}
```

Output:



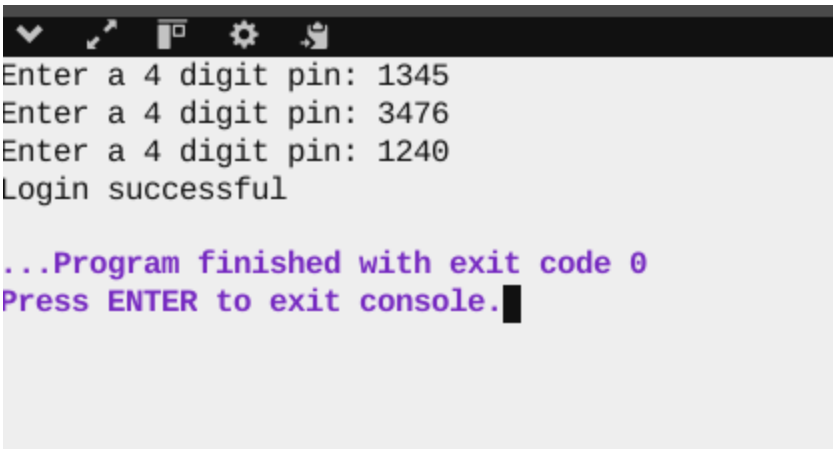
- Problem 3:

  Source code:

```
#include <stdio.h>
int main() {
int pass,count=1;
while(count<=3)
{
   printf("Enter a 4 digit pin: ");
   scanf("%d",&pass);
   if (pass==1240)
   {
   printf("Login successful");
   break;
   }
   count++;
}

}
```

Output:

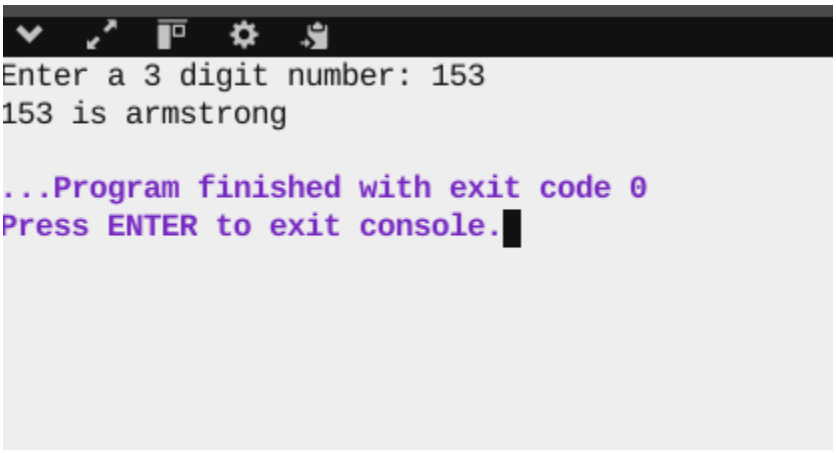


- Problem 4:

Source code:

```
#include <stdio.h>
int main() {
int num,d1,d2,d3,total;
printf("Enter a 3 digit number: ");
scanf("%d",&num);
d1=num/100;
d2=(num%100)/10;
d3=num%10;
total = (d1*d1*d1)+(d2*d2*d2)+(d3*d3*d3);
if (num==total)
printf("%d is armstrong",num);
else
printf("%d is not armstrong",num);
}
```

Output:

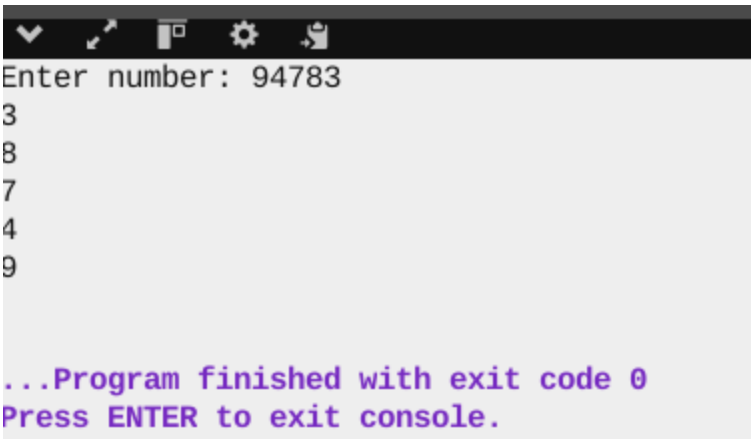


- Problem 5:
  Source code:

```
#include <stdio.h>
int main() {
int num;
printf("Enter number: ");
scanf("%d",&num);
do{
   printf("%d\n",num%10);
   num = num/10;
}
while (num>0);

}
```

Output:



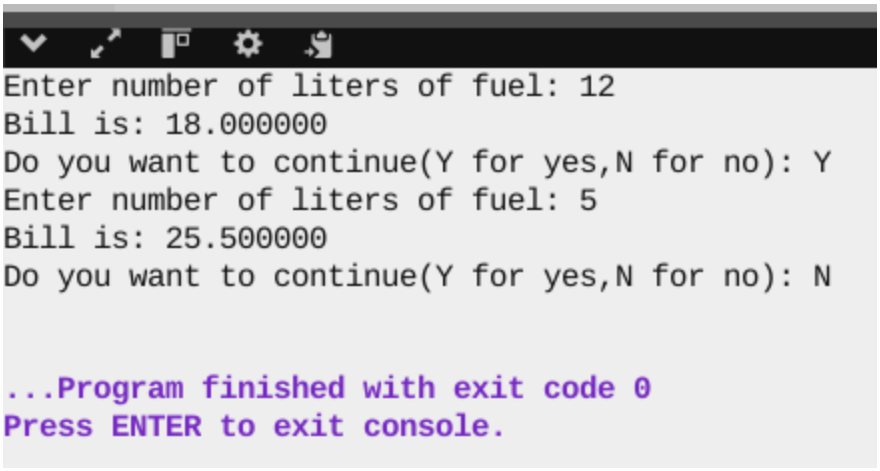
- Problem 6:

  Source code:

```
#include <stdio.h>
int main() {
int lit;
float cost=0;
char c;
do{
printf("Enter number of liters of fuel: ");
scanf("%d",&lit);
cost=(cost+(lit*1.5));
printf("Bill is: %f\n",cost);
printf("Do you want to continue(Y for yes,N for no): ");
scanf(" %c",&c);
}
while(c=='Y');
```

}

Output:



- Problem 7:

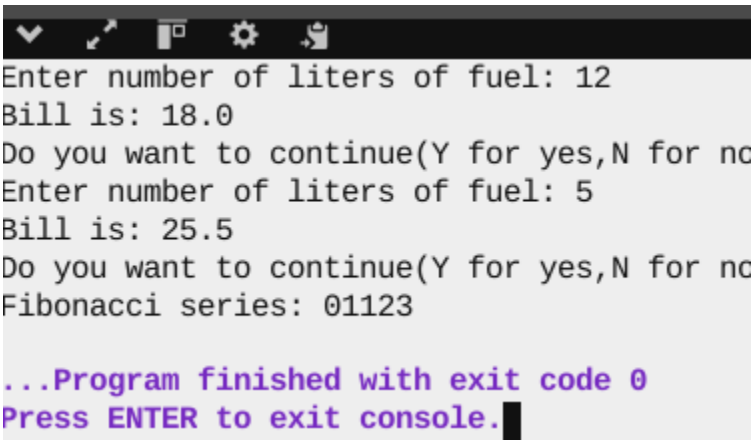
Source code:

```
#include <stdio.h>
int main()
{
   int lit,i,x=0,y=1,sum,flag=0;
   float cost = 0;
   char c;
   do{
     printf("Enter number of liters of fuel: ");
     scanf("%d",&lit);
     cost+=(lit*1.5);
     printf("Bill is: %.1f\n",cost);
     printf("Do you want to continue(Y for yes,N for no): ");
     scanf(" %c",&c);
    }
while(c=='Y');
```

```
   //fibonacci series:
   for (i=2;i<lit;i++)
{
   if (lit%i==0)
   {
   flag=1;
   break;
   }
}
   if(flag==0)
   {
      printf(“Fibonacci series: “);
      for (i=1; i<=lit; i++)
      {
         printf("%d",x);
         sum=x+y;
         x=y;
         y=sum;
      }
   }
   else
   printf("%d is not a prime number so no fibonacci series",lit);

}
```

Output:



- Problem 8:

Source code:

```
#include <stdio.h>
int main()
{
   int num,i,fact=1;
   printf("Enter a number for factorial: ");
   scanf("%d",&num);
   for (i=num;i>=1;i--)
   {
```

```
        fact=fact*i;
    }
     printf("Factorial of %d is: %d",num,fact);
}
```

Output: