Assignment 3

Q2

```
//print table
#include<stdio.h>
void main(){
	int num=2,a;
	int i=0;

	while(i<10){
		a=++i;
		printf("%d * %d = %d \n",num,a,num*a);

	}
}
```

Q1

```
//print no from 1 to 10
#include<stdio.h>
void main(){
	int i=1;
	while(i<=10){
		printf("%d\n",i);
		i++;
	}
}
```

Q3

```
//sum of the number within given range
#include<stdio.h>
void main(){
	int start=5,end=10;
	int sum=0;

	int i=start;
	while(i<=end){
		sum=sum+i;
		i++;
	}
	printf("sum from %d to %d is %d",start,end,sum);
}
```

Q4

```
//prime number
```

```
#include<stdio.h>
void main(){
	int num=10;
	int i=2;
	while(i<num){
		if(num%i!=0){
			i++;
		}
		else{
			break;
		}
	}

	if(i==num){
		printf("Number is prime");
	}
	else{
		printf("number is not prime");
	}
}
```

Q5

```
//armstrong by count of digits//4 digit 1634 3digit 153
#include<stdio.h>
#include<math.h>
void main(){
	int num,rem;
	printf("Enter the num:");
	scanf("%d",&num);

	int num_O=num;
	int num_2=num;
	int sum_P=0;

	int count=0;
	while(num>0){
		num=num/10;
		count++;
	}

	while(num_2>0){
```

```
		rem=num_2%10;
		num_2=num_2/10;//dec

	//pow(base,power)

	//power=pow(rem,count);
		//by using loop // to calculate the power as per count
				int power=1;
				int cnt=count;

					while(cnt!=0){
						power=power*rem;
						cnt--;
					}

		sum_P=sum_P+power;
	}



	if(num_O==sum_P)
	{
		printf("%d is armstrong number",num_O);

	}
	else{
		printf("%d is not an armstrong number",num_O);
	}


}
```

Q6

```
//perfect number
#include<stdio.h>
void main(){
	int num=6,sum_F=0;

	for(int i=1;i<num;i++){
		if(num%i==0){
			sum_F=sum_F+i;//adding factors here
		}
```

```
	}

	// check it is perfect number or not
	if(num==sum_F){
		printf("It is a perfect number %d",num);

	}
	else{
		printf("It is not a perfect number %d",num);
	}
}
```

Q7

```
//factorial number
#include<stdio.h>
void main(){
	int num=5,fact=1;
	int i=num;

	while(i>0){
		fact=fact*i;
		printf("\n fact is %d and i is %d",fact,i);
		i--;
	}

	printf("\n factorial of %d is %d",num,fact);

}
```

Q8

```
//strong number
#include<stdio.h>

//declaration
int strong();


void main(){


	int res=strong();//call
```

```
	if(res){
		printf("It is strong number");
	}
	else{
		printf("It is not strong number");
	}



}

int strong(){

	int num=145;
	int num_O=num,rem,sum_fact=0;
	while(num>0){
		rem=num%10;
		num=num/10;//inc /dec
			//for factorial
			int fact=1;//for each iteration it must be 1 initialy
				while(rem>0){
					fact=fact*rem;
					rem--;


				}
		sum_fact=sum_fact+fact;
	}

	//check the sum of fact of each digit
	if(num_O==sum_fact){
		return 1;
	}
	else{
		return 0;
	}

	printf("after returns");



}
```

Q9

```
//palindrom num -->num==reverse of that num
#include<stdio.h>
void main(){
	int num=121;
	int num_O=num,rev=0;
	// seperate the digits
	int rem=0;

	while(num>0){
		rem=num%10;
		num=num/10;
		rev=rev*10+rem;
	}

	if(rev==num_O){
		printf("The number is palindrom %d",num_O);

	}
	else{
		printf("The number is not palindrom %d ",num_O);
	}

}
```

Q10

```
//sum of first and last digit of the number
#include<stdio.h>
void main(){
	int num=143;
	int O_num=num;
	int last_digit,first_digit,rem,sum=0;
	last_digit=num%10;
	printf("\nlast %d",last_digit);

	while(num>0){
		rem=num%10;
		num=num/10;
	}
	first_digit=rem;
	printf("\nfirst %d",first_digit);
```

```
        sum=first_digit+last_digit;


        printf("\nThe sum of last and first digit of the num %d is %d",O_num,sum);


}
```

****