Exercice 2 :

```
#include <stdio.h>

int main()
{
	int n, i;
	scanf("%d", &n);
	for(i = 2; i <= n/2; i++)
	{
		if(n%i==0)
			printf("%d\t", i);
	}
}
```

Exercice 3 :

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>

char* prefixecommun(char* chaine1, char* chaine2)
{
	char* prefix = NULL;
	int len = strlen(chaine1) < strlen(chaine2) ? strlen(chaine1) : strlen(chaine2);
	int i;
	//strlwr(chaine1); Lower all chars in chaine1
	//strlwr(chaine2); Lower all chars in chaine2
	for(i=0; i< len; i++)
	{
		if(chaine1[i] != chaine2[i]) break;
		prefix = (char*)realloc(prefix, i+1);
		prefix[i] = chaine1[i];
	}
	if(i!=0)
	{
		prefix = (char*)realloc(prefix, i+1);
		prefix[i] = '\0';
	}
	return prefix;
}
```

```
int main()
{
	char* prefix;
	char ch1[50], ch2[50];
	puts("ch1 : ");
	gets(ch1);
	puts("ch2 : ");
	gets(ch2);
	prefix = prefixecommun(ch1, ch2);
	if(prefix != NULL)
	{
		puts("prefix : ");
		puts(prefix);
	}
	return 0;
}
```

Exercice 4 :

```
#include <stdio.h>
#include <stdlib.h>
#include <time.h>

float* Moyenne(int T[], int N, int Filtre)
{
	float* K = (float*)malloc(N*sizeof(float));
	int i, j;
	int count, moy;
	for(i = 0; i < N; i ++)
	{
		count = 0;
		moy = 0;
		for(j = i - Filtre/2 ; j <= i + Filtre/2 ; j++)
		{
			if(j >= N || j < 0) continue;
			moy = moy + T[j];
			count++;
		}
		K[i] = moy / count;
	}
	return K;
}
```

```
int main()
{
	int T[10], i;
	float *K;
	for(i = 0; i < 10; i++)
		T[i] = rand() % 10;
	for(i = 0; i < 10; i++)
	{
		printf("T[%d] = %d\n",i, T[i]);
	}
	K = Moyenne(T, 10, 3);
	for(i = 0; i < 10; i++)
	{
		printf("K[%d] = %f\n",i, K[i]);
	}
}
```