



Mesure du Temps de Parcours par RFID

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Année 2011-Groupe Q2

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Introduction

- I) Présentation
 - 1) Idée générale
 - 2) La RFID
 - 3) Cahier des charges

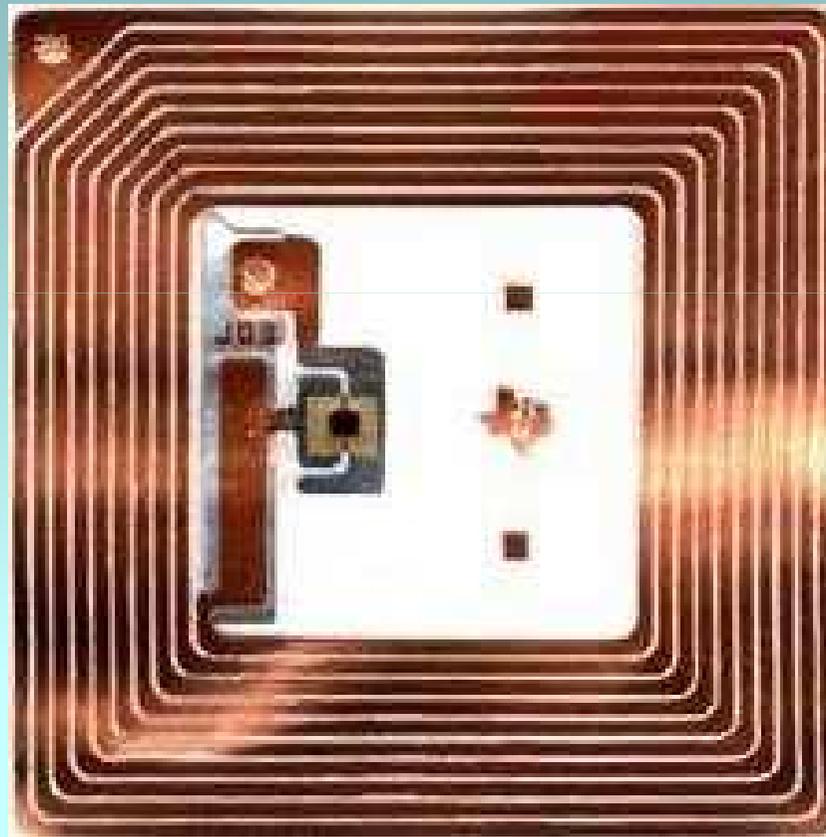
- II) Réalisation
 - 1) Les prototypes
 - 2) Les programmes de lecture et d'écriture
 - 3) Problèmes et Erreur rencontrés

- Conclusion

Idée Générale



La RFID



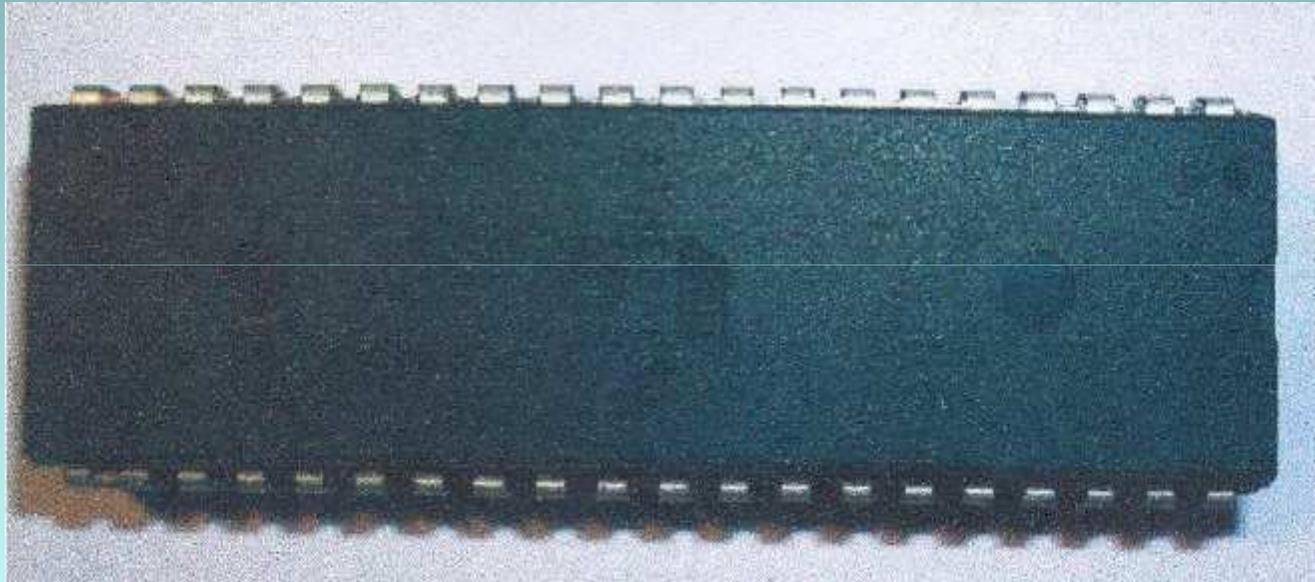
Le Planning

	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3
Prise de connaissance du sujet	Blue	Blue	Blue			Grey												
Étude des différentes solutions techniques	Yellow	Yellow				Grey												
Choix des solutions techniques			Blue	Blue		Grey												
Étude du système				Blue	Blue		Blue	Blue										
Mise en œuvre		Yellow	Yellow			Grey	Blue	Blue	Blue	Blue								
Réalisation d'un prototype						Grey			Blue	Blue								
Programmation						Grey				Blue	Blue							
Mesures et tests				Yellow	Yellow		Yellow	Yellow	Yellow	Yellow	Yellow							
Redaction du rapport						Grey					Blue	Blue	Blue				Yellow	
Présentation orale						Grey												Blue
						Grey												Yellow

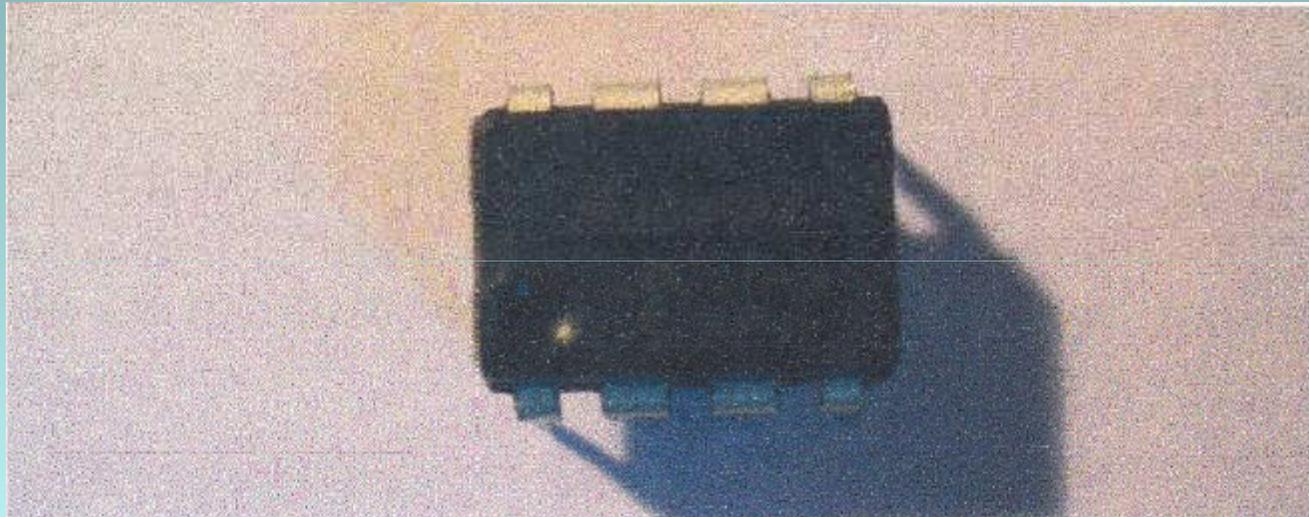
Blue	Planning prévisionnel
Yellow	Planning réel
Green	Séance libre
Red	Apprentissage Orcad

Les principaux composants

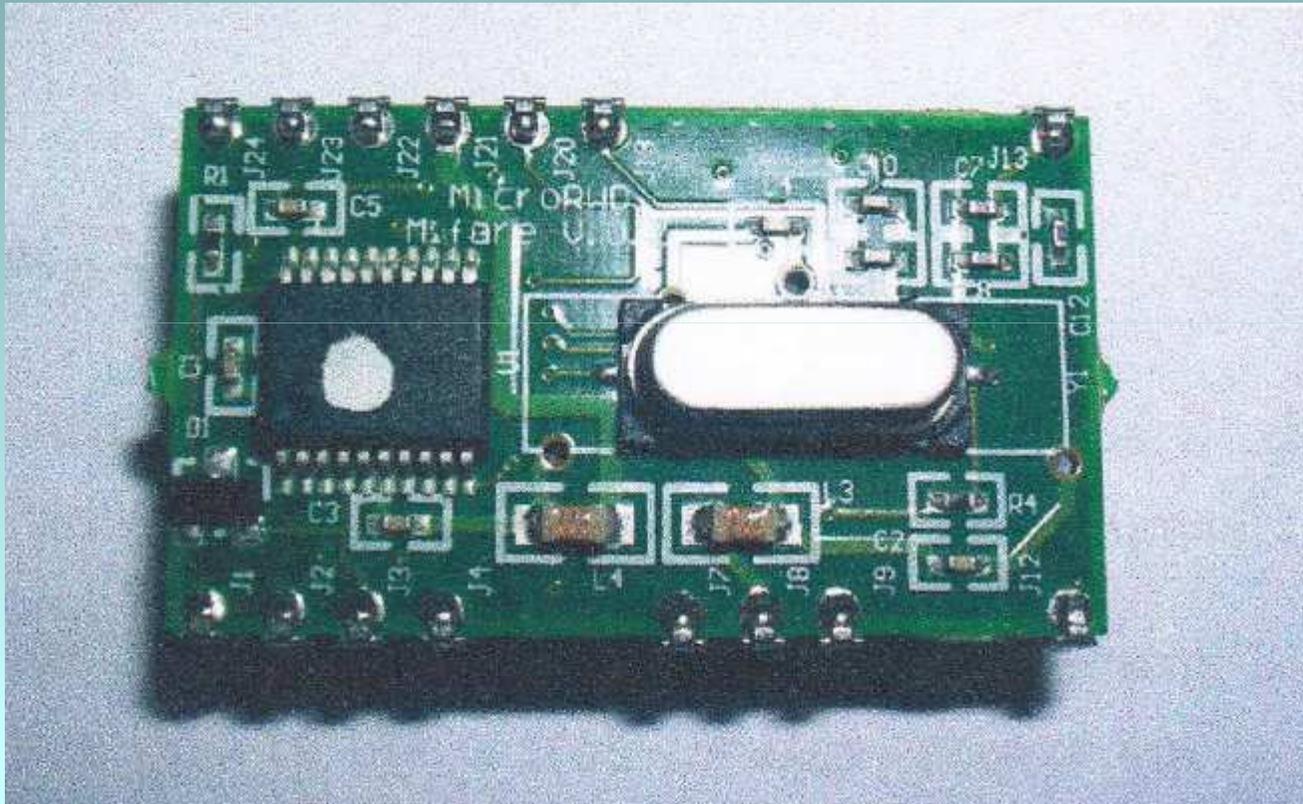
1) Le microcontrôleur ATMEGA 8535



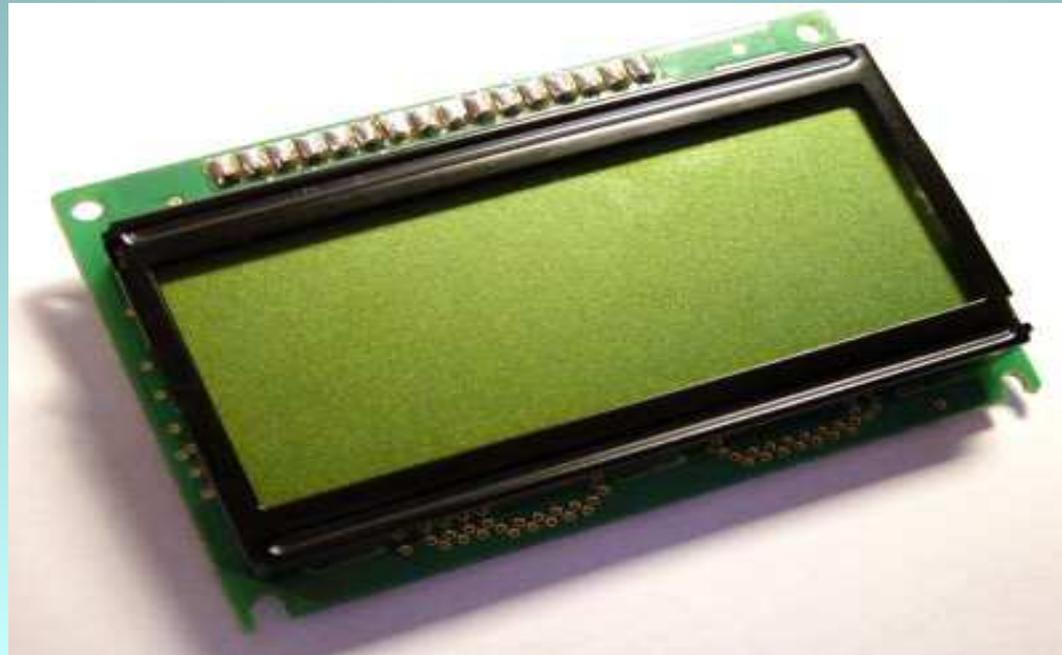
2) Le régulateur de tension LM2574N-5



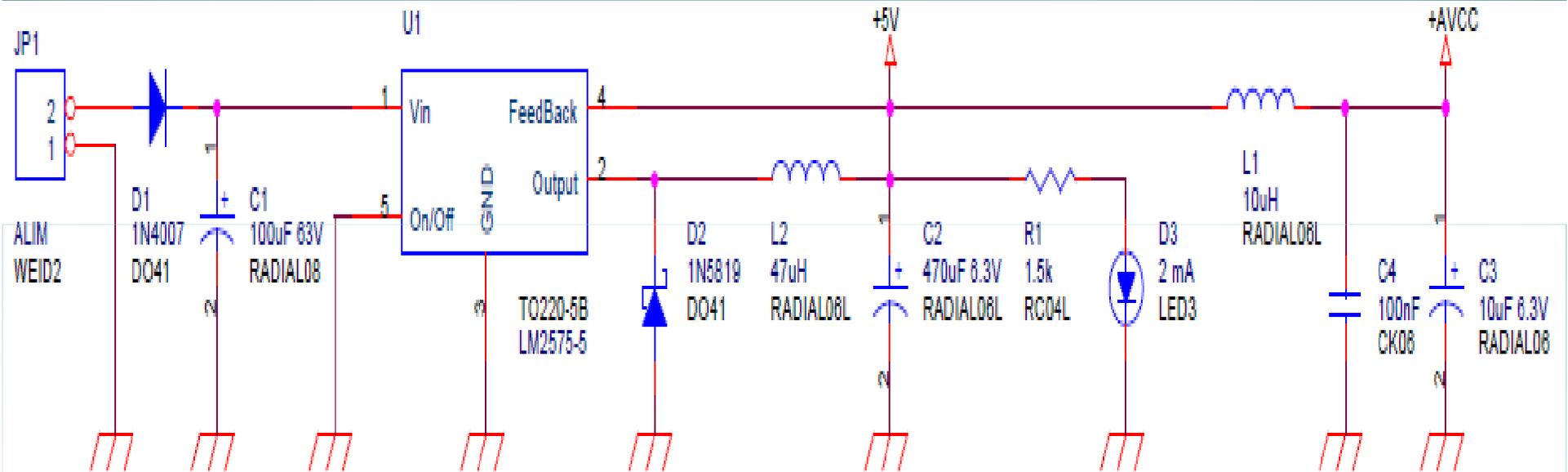
3) Le module RFID RWD MIFARE



4) L'afficheur 16X4 caractères

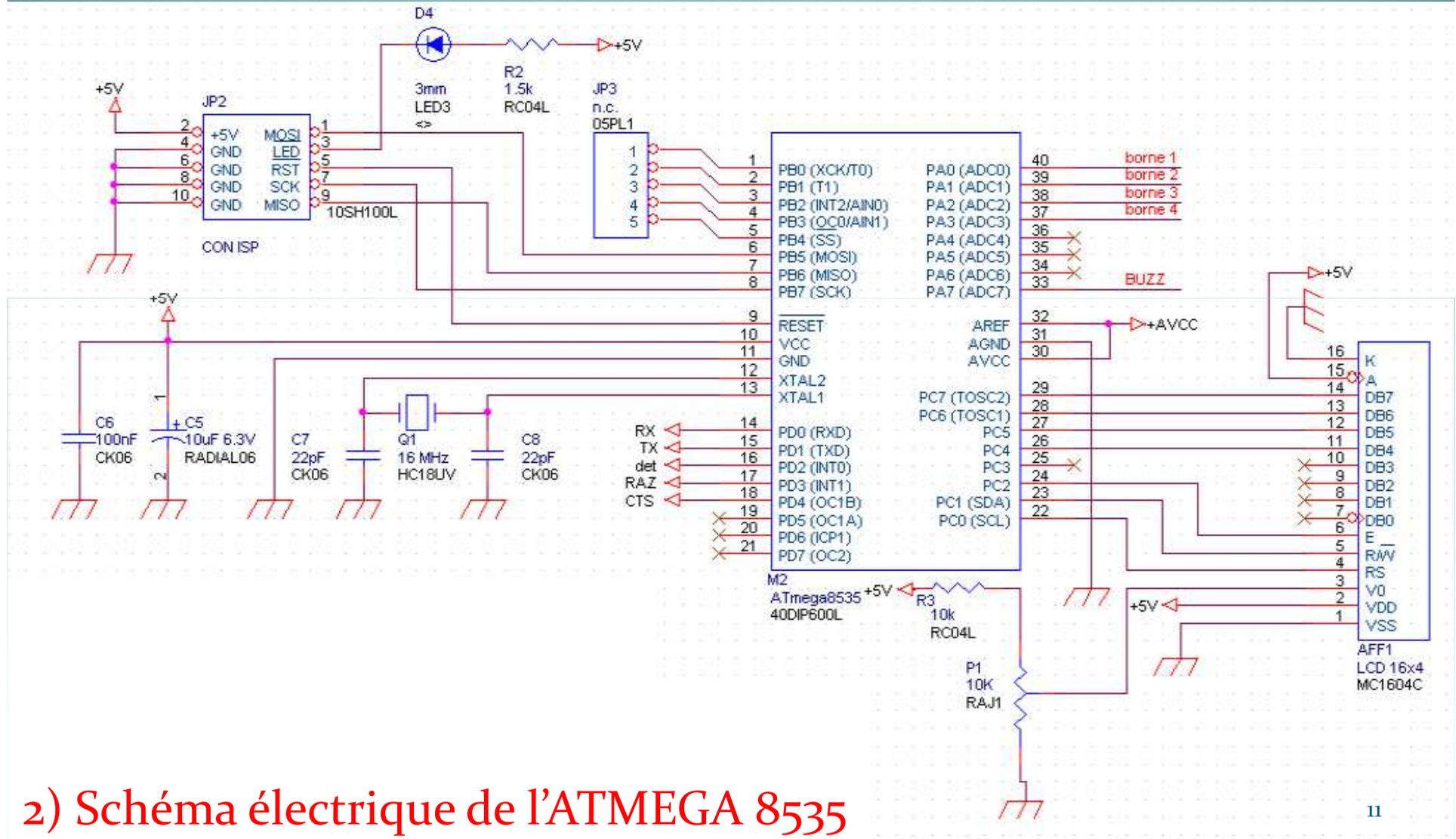


Les Prototypes



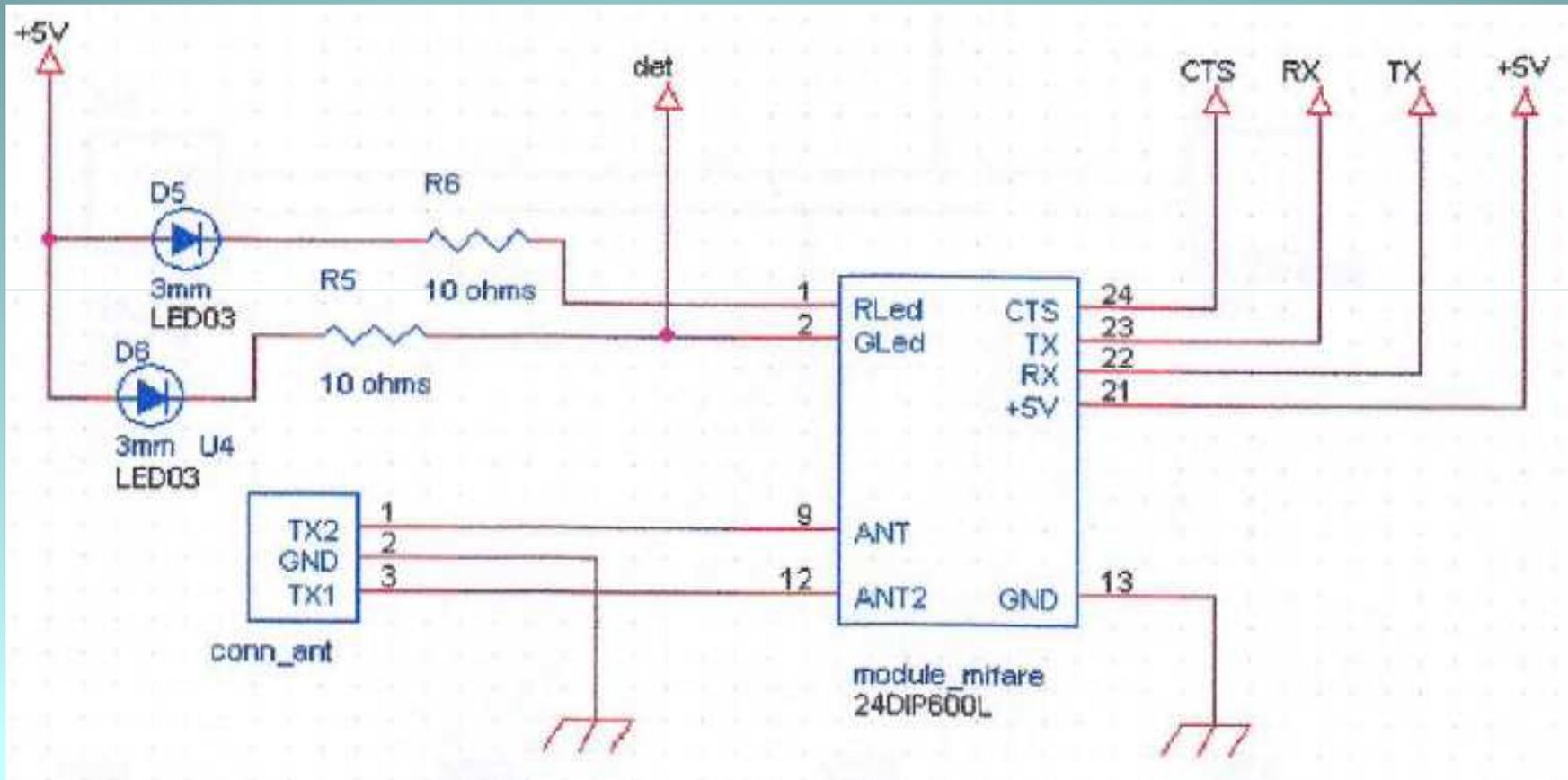
1) Schéma électrique du régulateur de tension

Les Prototypes



2) Schéma électrique de l'ATMEGA 8535

Les Prototypes



3) Schéma électrique du module RFID

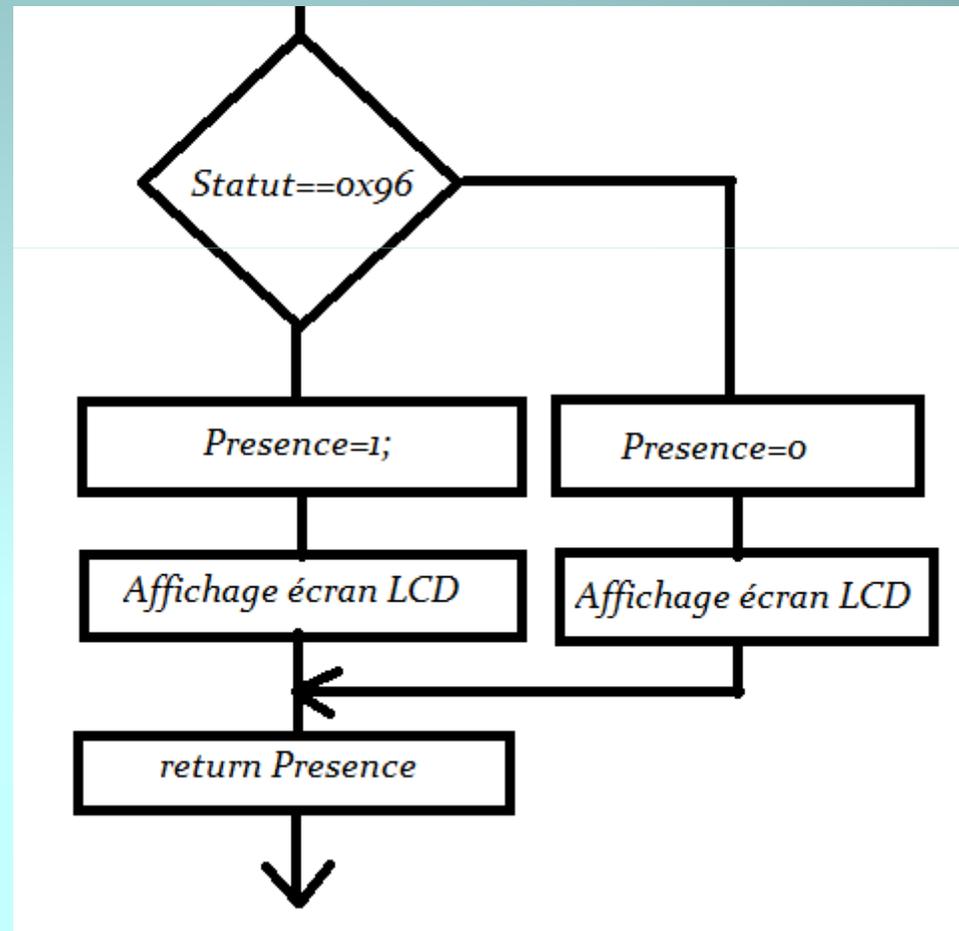
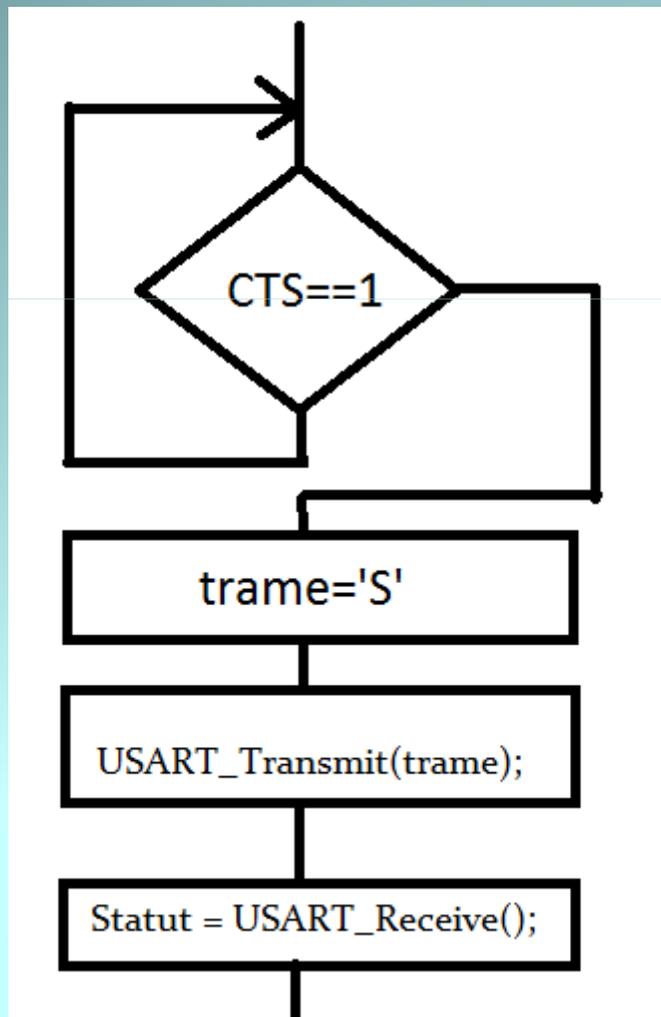
Les Prototypes



4) La carte finale

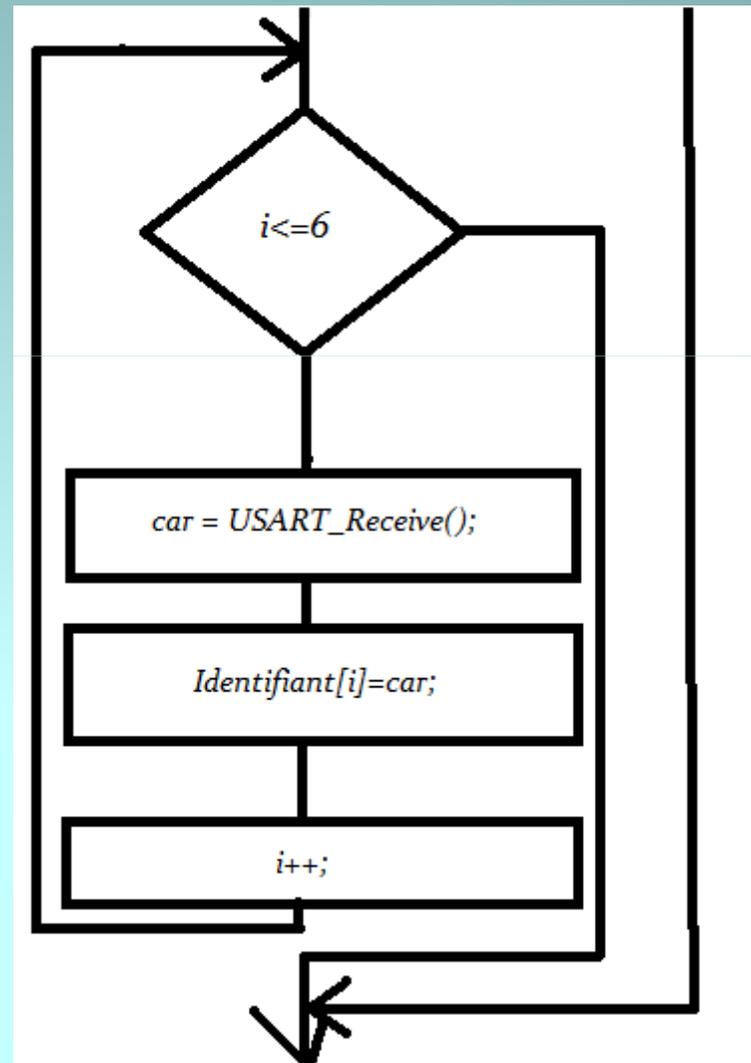
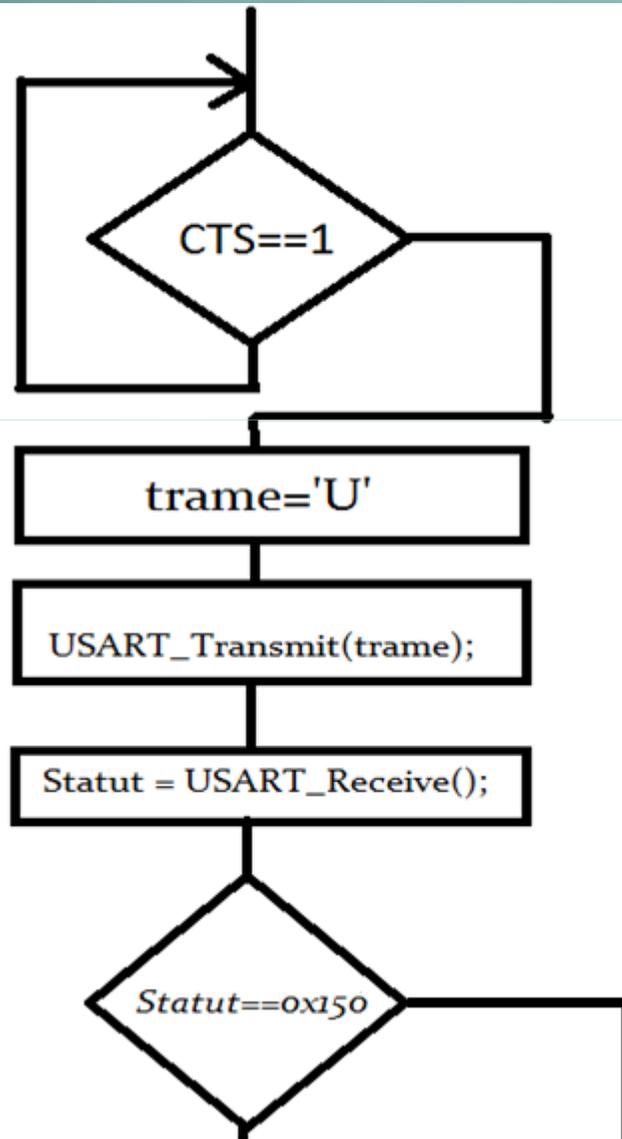
Les Programmes (écriture)

1) Vérification du statut



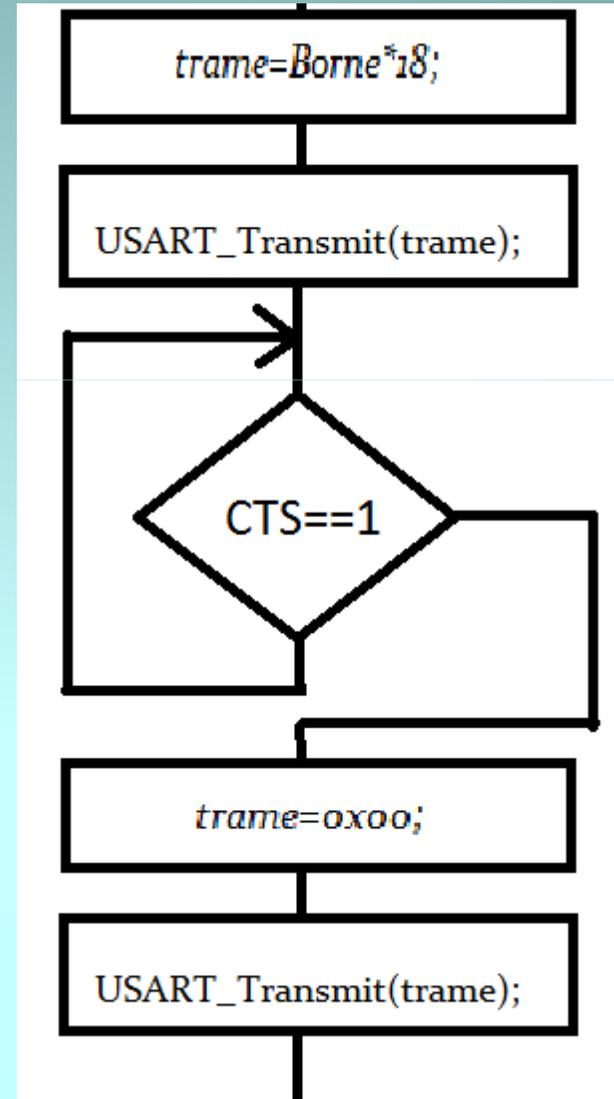
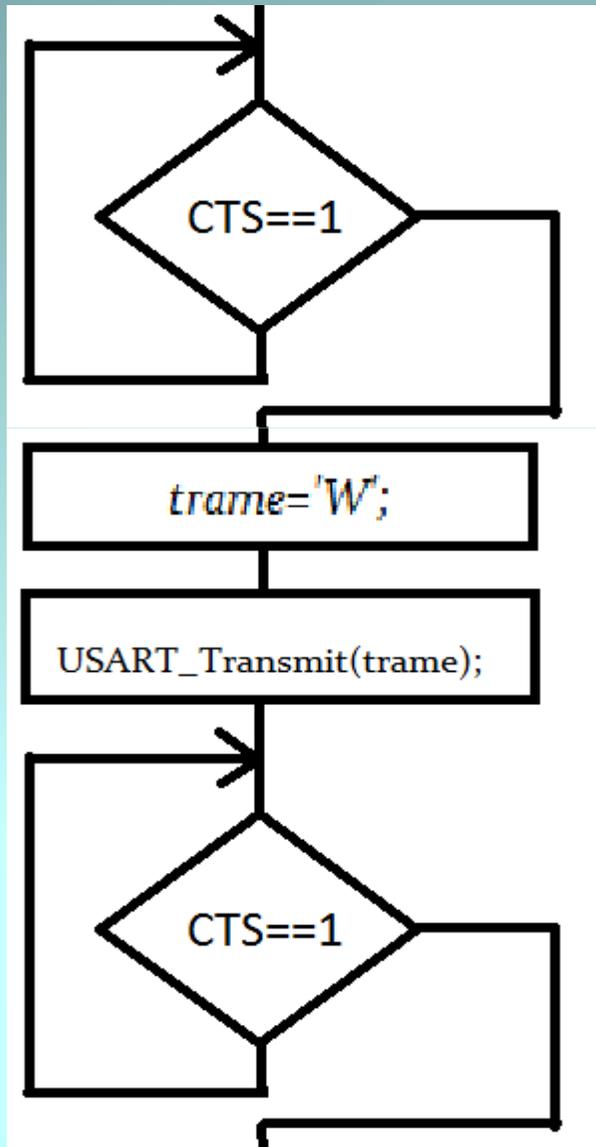
Les Programmes (écriture)

2) Lecture de l'UID



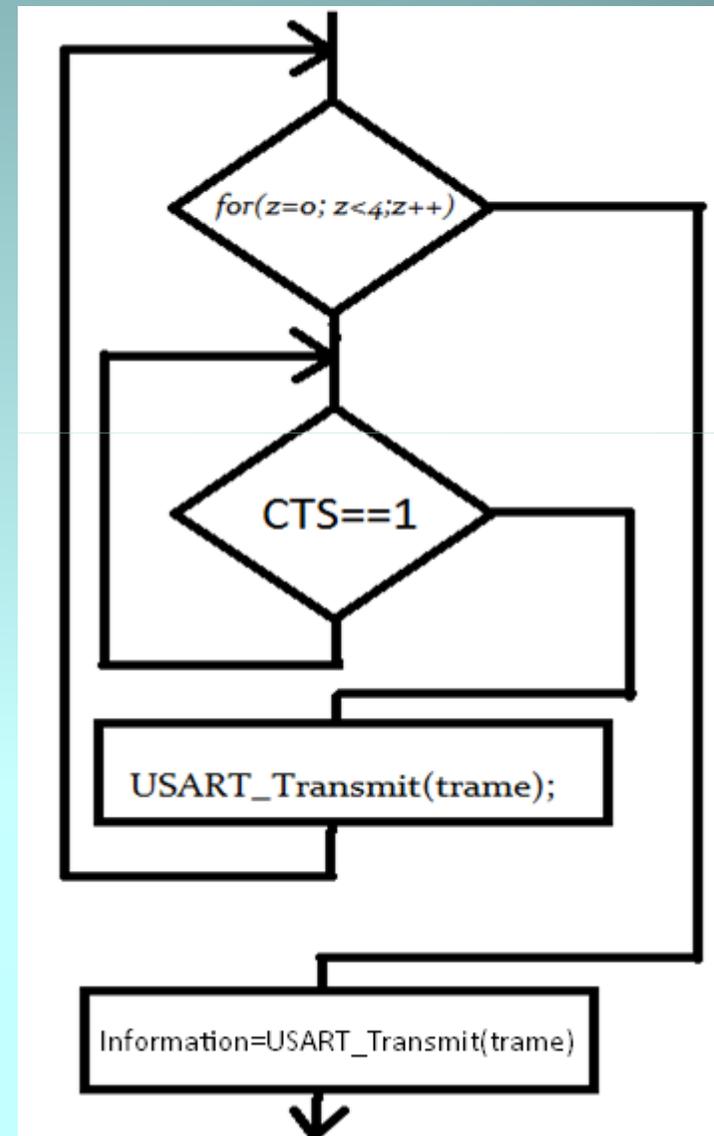
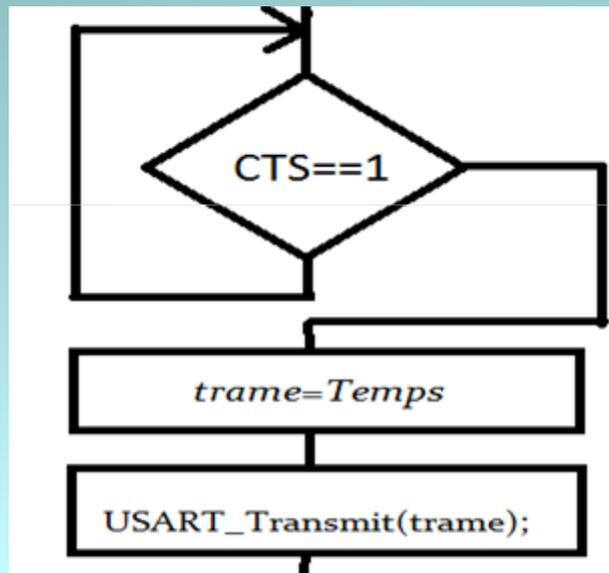
Les Programmes (écriture)

3) Ecriture



Les Programmes (écriture)

3) Ecriture (suite)



Les Programmes (écriture)

```
interrupt [TIM1_COMPA] void timer1_compa_isr(void)
{
    Temps++;
    if (Temps>=100)
    {
        Temps=0;
        Seconde++;
        if(Seconde>=60)
        {
            Seconde=0;
            Minute++;
            if(Minute>=60)
            {
                Minute=0;
                Heure++;
                if(Heure>=99)
                {
                    Heure=0;
                }
            }
        }
    }
}
```

Les Programmes (écriture)

```
interrupt [EXT_INT1] void ext_int1_isr(void)  
{  
    Temps=0;  
    Seconde=0;  
    Minute=0;  
    Heure=0;  
}
```



Les Programmes (lecture)

- `int VerifStatut (void);`
- `void Recoit_UID (void);`
- Fonction affichage:

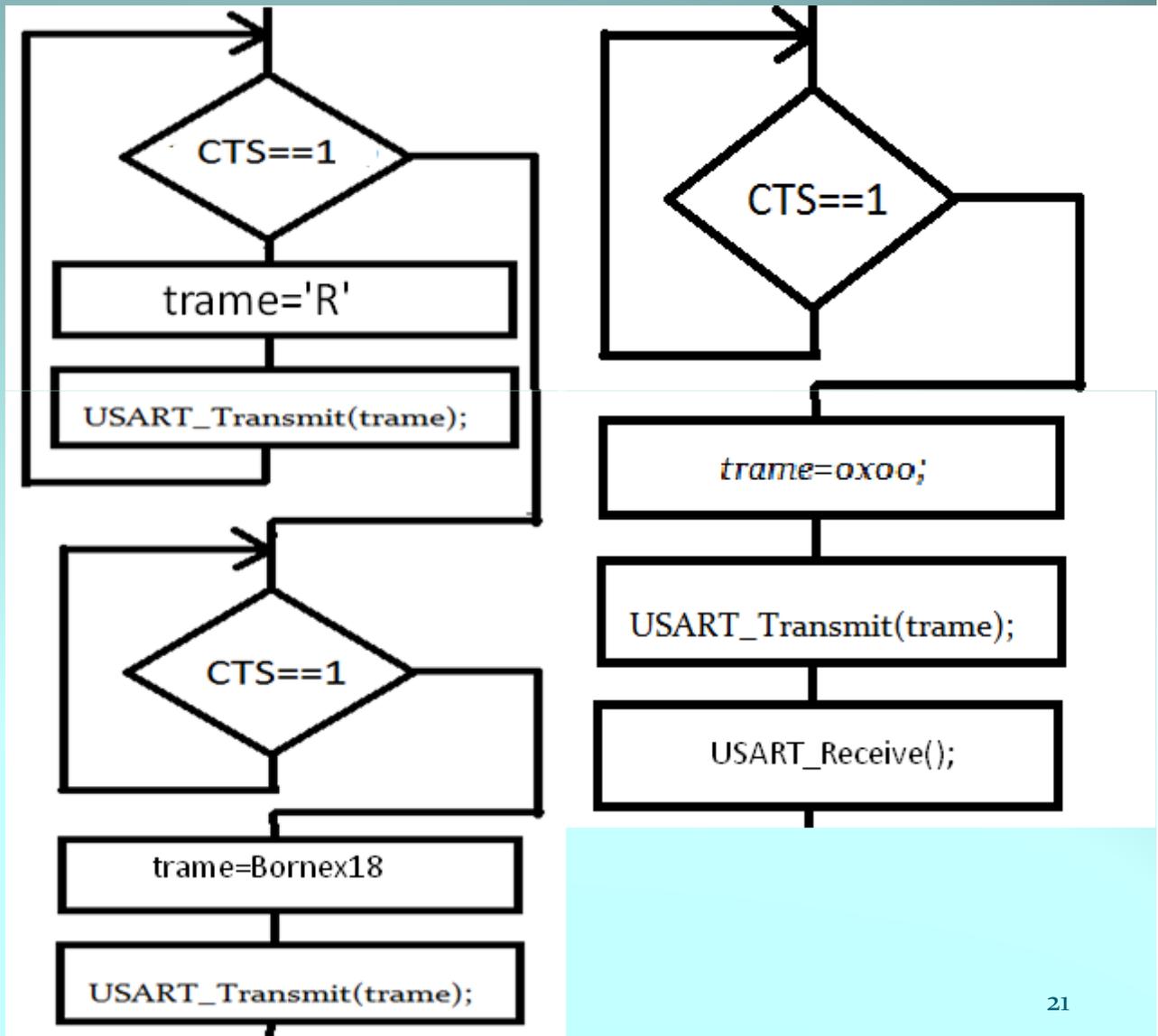
```
sprintf(tampon, "%03d", Temps[z]);
```

```
lcd_gotoxy(z*4, 1);
```

```
lcd_puts(tampon);
```

Les Programmes (lecture)

```
void Recoit_Info (int Borne)
```



Les Programmes (lecture)

```
Information = USART_Receive();
```

```
Information = (Information & 0xCF);
```

```
if(Information == 0x86)
```

```
{
```

```
    while(i<=15)
```

```
    {
```

```
        car = USART_Receive();
```

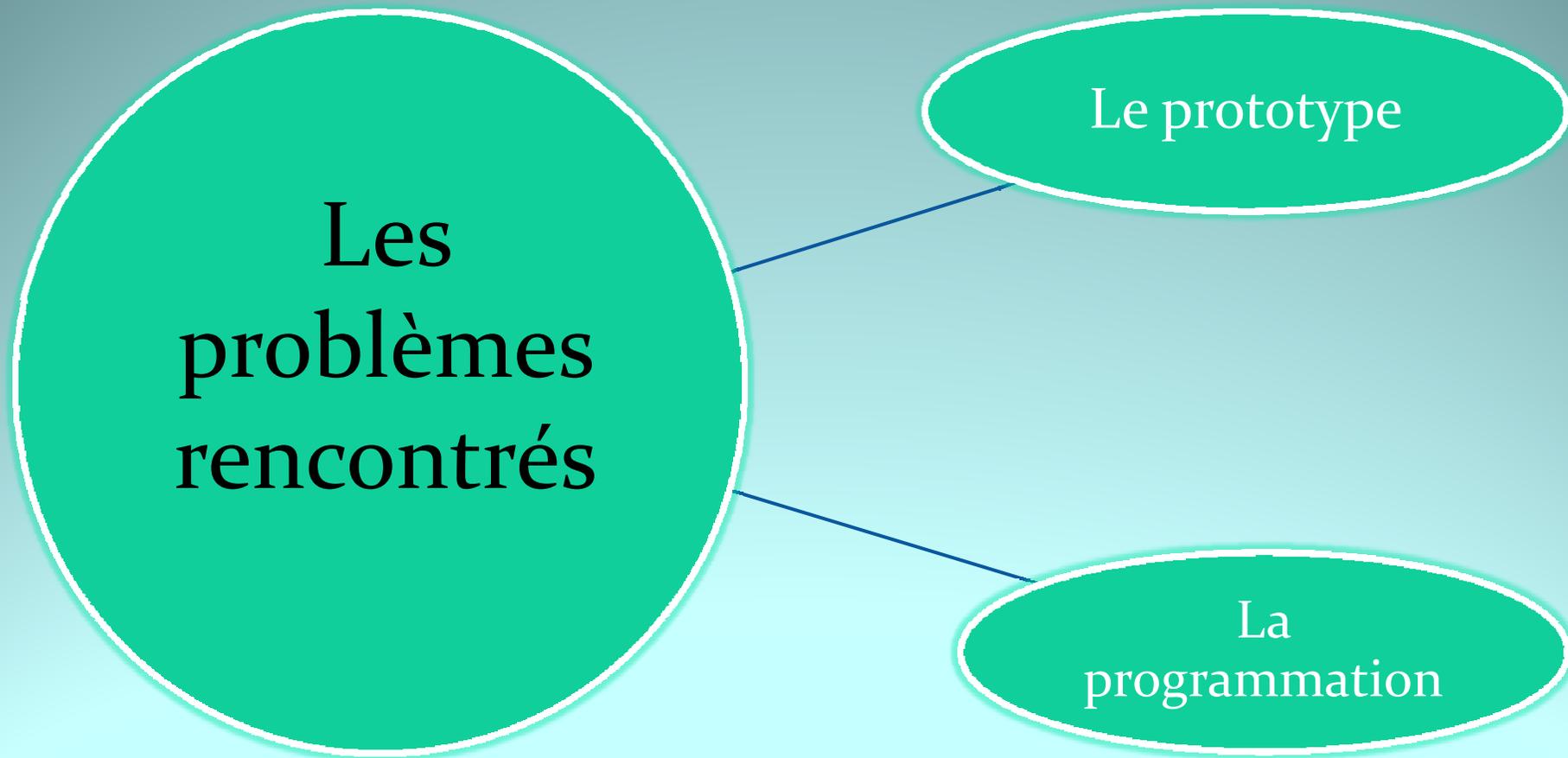
```
        Temps[i] = car;
```

```
        i++;
```

```
    }
```

```
}
```

```
}
```



Conclusion