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## 1.Application

### 1.1.APP APIs

```
void APP_Init(void);
uint8_t ADC_ATM(void);
void ADMIN_Mode(void);
void USER_Mode(void);
uint8_t Compare_Money(uint32_t Max_money, uint32_t User_money);
void Pass_check(void);
void TEMP(void);
uint8_t String_u8Comp(uint8_t *Str1, uint8_t *Str2);
void Get_Pass(uint8_t *str);
uint32_t String_u8ToNumb(uint8_t *Str);
```

## 2.HAL

### 2.1.EEPROM APIs

```
uint8_t change_stringToBin(uint8_t*str);  
void eeprom_send_string(uint8_t *str,uint8_t address);  
void eeprom_recieve_string(uint8_t *str,uint8_t address);
```

### 2.2.Key Pad

```
/**  
 * @brief Initialize KeyPad Pins  
 *  
 */  
void KEYPAD_voidInit(void);  
  
/**  
 * @brief Read Pressed Button on KeyPad and Return Key  
 *  
 * @return uint8_t Pressed  
 */  
uint8_t KEYPAD_u8Read(void);
```

### 2.3.LCD

```
void lcd_init(void);  
void lcd_command(uint8_t cmd);  
void lcd_sendChar(uint8_t data);  
void lcd_sendString(uint8_t * data);  
void lcd_sendNum( u16 copy_u16number);  
void lcd_clear(void);
```

## 2.4.Motor

```
void MOTOR_voidInit(void);
void MOTOR_voidRotateClkWise(uint8_t copy_u8top,uint8_t copy_u8down);
void MOTOR_voidRotateAntiClkWise(uint8_t copy_u8top,uint8_t copy_u8down);
void MOTOR_voidGeneratePwm(uint8_t copy_u8dutydcycle);
void MOTOR_voidStop(void);
```

## 2.5.LM35

```
u16 LM35_U16Read(uint8_t Copy_u8readchannel);
void LM35_VoidInit(void);
```

## 3.MCAL

### 3.1.DIO

```
EN_ERRORSTATE_t DIO_voidSetPinValue(EN_port_num EN_Port, EN_pin_num EN_Pin, EN_value_type EN_Value);
EN_ERRORSTATE_t DIO_voidSetPinDirection(EN_port_num EN_port, EN_pin_num EN_Pin, EN_direction_type EN_Direction);
EN_value_type DIO_u8GetPinValue(EN_port_num EN_Port, EN_pin_num EN_Pin);

EN_ERRORSTATE_t DIO_voidTogPin(EN_port_num EN_Port, EN_pin_num EN_Pin);

EN_ERRORSTATE_t DIO_voidSetPortDirection(EN_port_num EN_Port, EN_direction_type EN_Direction);
EN_ERRORSTATE_t DIO_voidSetPortValue(EN_port_num EN_Port, EN_value_type EN_Value);
EN_ERRORSTATE_t DIO_voidInpullUp(EN_port_num EN_Port, EN_pin_num EN_Pin);
```

### 3.2.EXTI

```
EN_EXTIERRORSTATE_t EXTI_ENEnable(EN_EXTI_t Interrupt);
EN_EXTIERRORSTATE_t EXTI_ENDisable(EN_EXTI_t Interrupt);
EN_EXTIERRORSTATE_t EXTI_ENTriggerEdge(EN_EXTI_t Interrupt, EN_TriggerEdge_t Edge);
EN_EXTIERRORSTATE_t EXTI_SetCallback(EN_EXTI_t Interrupt, void (*LocalPtr)(void));
```

### 3.3.ADC

```
void ADC_VoidInit(void);

uint32_t ADC_U16GetChannelReading(uint8_t Channel);
```

### 3.4.I2C

```
void I2C_MasterInit(void);
void I2C_MasterStart(void);
void I2C_SlaveInit(void);
void I2C_SendSlaveAddressWithWrite(uint8_t address);
void I2C_SendSlaveAddressWithRead(uint8_t address);
void I2C_WriteDataByte(uint8_t data);
uint8_t I2C_ReadDataByte(void);
void I2C_MasterStop(void);
```

### 3.5.SPI

```
void SPI_VidInitMaster(void);
void SPI_VidInitSlave(void);
void SPI_VidSendByte(const uint8_t copy_U8Data);
uint8_t SPI_U8RecieveByte(void);
void SPI_VidSendString(uint8_t *copy_str);
void SPI_VidRecieveString(uint8_t *copy_str);
```

### 3.6.UART

```
EN_ERRORSTATE_t UART_ENInit(void);
EN_ERRORSTATE_t UART_ENSendData(uint8_t Data);
EN_ERRORSTATE_t UART_ENSendNoBlock(uint8_t Data);
uint8_t UART_u8ReceiveData(void);
uint8_t UART_u8ReceiveNoBlock(uint8_t *Data);
void UART_voidTXInterruptEnable(void);
void UART_voidRXInterruptEnable(void);
void UART_voidSendString_Ashync(uint8_t *str);
void UART_voidReceiveString_Ashync(uint8_t *Str);
```