



```
//*****  
//*****  
//  
//  
//          Konwersje          **  
//          funkcjonalnosci:          **  
//          - Konwersja systemu dziesiętkowego na heksdecymalny          **  
//          - Konwersja systemu heksadecymalnego na dziesiętkowy          **  
//          - Dopisywanie liczby heksdecymalnej na końcu łańcucha znakowego **  
//*****
```

```
#define NULL '\0'  
#define HEX_bm 0xF
```

```
void UIntToHexStr(unsigned int uiValue, char pcStr[]) {  
    unsigned char ucCharCounter;  
  
    pcStr[0] = '0';  
    pcStr[1] = 'x';  
  
    for (ucCharCounter = 0; ucCharCounter < 4; ucCharCounter++) {  
        unsigned char ucNibble = (uiValue >> ((3 - ucCharCounter) * 4)) & HEX_bm;  
  
        if(ucNibble < 10){  
            pcStr[ucCharCounter + 2] = '0' + ucNibble;  
        }else {  
            pcStr[ucCharCounter + 2] = 'A' + ucNibble - 10;  
        }  
    }  
  
    pcStr[6] = NULL;  
}
```



```
enum Result { OK, ERROR };

enum Result eHexStringToUInt(char pcStr[], unsigned int *puiValue) {
    unsigned char ucCharCounter;
    unsigned char ucCurrentChar;

    if ( ( pcStr[0] != '0') || (pcStr[1] != 'x') ) || pcStr[2] == NULL) {
        return ERROR;
    }

    *puiValue = 0;

    for (ucCharCounter = 2; pcStr[ucCharCounter] != NULL; ucCharCounter++) {
        if(ucCharCounter == 6 ){
            return ERROR;
        }
        *puiValue = *puiValue << 4;

        ucCurrentChar = pcStr[ucCharCounter];

        if ((ucCurrentChar >= '0') && (ucCurrentChar <= '9')) {
            *puiValue = *puiValue | (ucCurrentChar - '0');
        } else if ((ucCurrentChar >= 'A') && (ucCurrentChar <= 'F')) {
            *puiValue = *puiValue | (ucCurrentChar - 'A' + 10);
        } else {
            return ERROR;
        }
    }

    return OK;
}

void AppendUIntToString (unsigned int uiValue, char pcDestinationStr[]){
    unsigned char ucCharacterCounter;

    for(ucCharacterCounter=0; pcDestinationStr[ucCharacterCounter]!=NULL; ucCharacterCounter++){

        UIntToHexStr(uiValue, pcDestinationStr+ucCharacterCounter);
    }
}
```