```cpp
int ConvertInputStringToNumber(std::string input, int base)

    char symbols[] = { '0','1','2','3','4','5','6','7','8','9','A','B','C','D','E','F' };
    int number = 0;
    std::vector<uint8_t> vec;

    for (int inputIterator = input.length() - 1; inputIterator ≥ 0; inputIterator--)

        for (int symbolIterator = 0; symbolIterator < sizeof(symbols); symbolIterator++)

            if (toupper(input[inputIterator]) == symbols[symbolIterator])

                vec.push_back(symbolIterator);

    for (int i = 0; i < vec.size(); i++)

        number += (vec[i] * pow(base, i));

    return number;
```