

AININ MAYASYIFA ALDA

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## TUGAS

1. ASCII merupakan kepanjangan dari (*American Standard Code for Information Interchange*), dan pengertian dari ASCII sendiri adalah suatu standar internasional dalam kode huruf dan simbol seperti Hex dan Unicode tetapi ASCII lebih bersifat universal, contohnya “124” adalah untuk karakter "|". Ia selalu digunakan oleh komputer dan alat komunikasi lain untuk menunjukkan teks.

TABEL ASCII

| Decimal | Hexadesimal | Binary   | Character    | Description      |
|---------|-------------|----------|--------------|------------------|
| 32      | 20          | 00100000 | <b>Space</b> | <b>space</b>     |
| 33      | 21          | 00100001 | <b>!</b>     | exclamation mark |
| 34      | 22          | 00100010 | <b>"</b>     | double quote     |
| 35      | 23          | 00100011 | <b>#</b>     | number           |
| 36      | 24          | 00100100 | <b>\$</b>    | dollar           |
| 37      | 25          | 00100101 | <b>%</b>     | percent          |
| 38      | 26          | 00100110 | <b>&amp;</b> | ampersand        |

| Decimal | Hexadesimal | Binary   | Character | Description       |
|---------|-------------|----------|-----------|-------------------|
| 39      | 27          | 00100111 | '         | single quote      |
| 40      | 28          | 00101000 | (         | left parenthesis  |
| 41      | 29          | 00101001 | )         | right parenthesis |
| 42      | 2A          | 00101010 | *         | asterisk          |
| 43      | 2B          | 00101011 | +         | plus              |
| 44      | 2C          | 00101100 | ,         | comma             |
| 45      | 2D          | 00101101 | -         | minus             |
| 46      | 2E          | 00101110 | .         | period            |
| 47      | 2F          | 00101111 | /         | slash             |
| 48      | 30          | 00110000 | 0         | zero              |
| 49      | 31          | 00110001 | 1         | one               |
| 50      | 32          | 00110010 | 2         | two               |
| 51      | 33          | 00110011 | 3         | three             |
| 52      | 34          | 00110100 | 4         | four              |
| 53      | 35          | 00110101 | 5         | five              |
| 54      | 36          | 00110110 | 6         | six               |
| 55      | 37          | 00110111 | 7         | seven             |
| 56      | 38          | 00111000 | 8         | eight             |
| 57      | 39          | 00111001 | 9         | nine              |
| 58      | 3A          | 00111010 | :         | colon             |
| 59      | 3B          | 00111011 | ;         | semicolon         |
| 60      | 3C          | 00111100 | <         | less than         |
| 61      | 3D          | 00111101 | =         | equality sign     |
| 62      | 3E          | 00111110 | >         | greater than      |
| 63      | 3F          | 00111111 | ?         | question mark     |
| 64      | 40          | 01000000 | @         | at sign           |
| 65      | 41          | 01000001 | A         |                   |
| 66      | 42          | 01000010 | B         |                   |
| 67      | 43          | 01000011 | C         |                   |

| Decimal | Hexadesimal | Binary   | Character | Description          |
|---------|-------------|----------|-----------|----------------------|
| 68      | 44          | 01000100 | <b>D</b>  |                      |
| 69      | 45          | 01000101 | <b>E</b>  |                      |
| 70      | 46          | 01000110 | <b>F</b>  |                      |
| 71      | 47          | 01000111 | <b>G</b>  |                      |
| 72      | 48          | 01001000 | <b>H</b>  |                      |
| 73      | 49          | 01001001 | <b>I</b>  |                      |
| 74      | 4A          | 01001010 | <b>J</b>  |                      |
| 75      | 4B          | 01001011 | <b>K</b>  |                      |
| 76      | 4C          | 01001100 | <b>L</b>  |                      |
| 77      | 4D          | 01001101 | <b>M</b>  |                      |
| 78      | 4E          | 01001110 | <b>N</b>  |                      |
| 79      | 4F          | 01001111 | <b>O</b>  |                      |
| 80      | 50          | 01010000 | <b>P</b>  |                      |
| 81      | 51          | 01010001 | <b>Q</b>  |                      |
| 82      | 52          | 01010010 | <b>R</b>  |                      |
| 83      | 53          | 01010011 | <b>S</b>  |                      |
| 84      | 54          | 01010100 | <b>T</b>  |                      |
| 85      | 55          | 01010101 | <b>U</b>  |                      |
| 86      | 56          | 01010110 | <b>V</b>  |                      |
| 87      | 57          | 01010111 | <b>W</b>  |                      |
| 88      | 58          | 01011000 | <b>X</b>  |                      |
| 89      | 59          | 01011001 | <b>Y</b>  |                      |
| 90      | 5A          | 01011010 | <b>Z</b>  |                      |
| 91      | 5B          | 01011011 | <b>[</b>  | left square bracket  |
| 92      | 5C          | 01011100 | <b>\</b>  | backslash            |
| 93      | 5D          | 01011101 | <b>]</b>  | right square bracket |
| 94      | 5E          | 01011110 | <b>^</b>  | caret / circumflex   |
| 95      | 5F          | 01011111 | <b>_</b>  | underscore           |
| 96      | 60          | 01100000 | <b>`</b>  | grave / accent       |

| Decimal | Hexadesimal | Binary   | Character | Description         |
|---------|-------------|----------|-----------|---------------------|
| 97      | 61          | 01100001 | <b>a</b>  |                     |
| 98      | 62          | 01100010 | <b>b</b>  |                     |
| 99      | 63          | 01100011 | <b>c</b>  |                     |
| 100     | 64          | 01100100 | <b>d</b>  |                     |
| 101     | 65          | 01100101 | <b>e</b>  |                     |
| 102     | 66          | 01100110 | <b>f</b>  |                     |
| 103     | 67          | 01100111 | <b>g</b>  |                     |
| 104     | 68          | 01101000 | <b>h</b>  |                     |
| 105     | 69          | 01101001 | <b>i</b>  |                     |
| 106     | 6A          | 01101010 | <b>j</b>  |                     |
| 107     | 6B          | 01101011 | <b>k</b>  |                     |
| 108     | 6C          | 01101100 | <b>l</b>  |                     |
| 109     | 6D          | 01101101 | <b>m</b>  |                     |
| 110     | 6E          | 01101110 | <b>n</b>  |                     |
| 111     | 6F          | 01101111 | <b>o</b>  |                     |
| 112     | 70          | 01110000 | <b>p</b>  |                     |
| 113     | 71          | 01110001 | <b>q</b>  |                     |
| 114     | 72          | 01110010 | <b>r</b>  |                     |
| 115     | 73          | 01110011 | <b>s</b>  |                     |
| 116     | 74          | 01110100 | <b>t</b>  |                     |
| 117     | 75          | 01110101 | <b>u</b>  |                     |
| 118     | 76          | 01110110 | <b>v</b>  |                     |
| 119     | 77          | 01110111 | <b>w</b>  |                     |
| 120     | 78          | 01111000 | <b>x</b>  |                     |
| 121     | 79          | 01111001 | <b>y</b>  |                     |
| 122     | 7A          | 01111010 | <b>z</b>  |                     |
| 123     | 7B          | 01111011 | <b>{</b>  | left curly bracket  |
| 124     | 7C          | 01111100 | <b> </b>  | vertical bar        |
| 125     | 7D          | 01111101 | <b>}</b>  | right curly bracket |

| Decimal | Hexadesima l | Binary   | Character | Description |
|---------|--------------|----------|-----------|-------------|
| 126     | 7E           | 01111110 | ~         | tilde       |
| 127     | 7F           | 01111111 | DEL       | delete      |

## 2. Daftar perintah assembly

### Daftar Assembly Directive

| Assembly Directive | Keterangan   |
|--------------------|--|
| EQU                | Pendefinisian konstanta                              |
| DB                 | Pendefinisian data dengan ukuran satuan 1 byte       |
| DW                 | Pendefinisian data dengan ukuran satuan 1 word       |
| DBIT               | Pendefinisian data dengan ukuran satuan 1 bit        |
| DS                 | Pemesanan tempat penyimpanan data di RAM             |
| ORG                | Inisialisasi alamat mulai program                    |
| END                | Penanda akhir program                                |
| CSEG               | Penanda penempatan di code segment                   |
| XSEG               | Penanda penempatan di external data segment          |
| DSEG               | Penanda penempatan di internal direct data segment   |
| ISEG               | Penanda penempatan di internal indirect data segment |
| BSEG               | Penanda penempatan di bit data segment               |
| CODE               | Penanda mulai pendefinisian program                  |
| XDATA              | Pendefinisian external data                          |
| DATA               | Pendefinisian internal direct data                   |
| IDATA              | Pendefinisian internal indirect data                 |
| BIT                | Pendefinisian data bit                               |

|          |                                    |
|----------|------------------------------------|
| #INCLUDE | Mengikutsertakan file program lain |
|----------|------------------------------------|

### Daftar Instruksi

| Instruksi | Keterangan Singkatan           |
|-----------|--------------------------------|
| ACALL     | Absolute Call                  |
| ADD       | Add                            |
| ADDC      | Add with Carry                 |
| AJMP      | Absolute Jump                  |
| ANL       | AND Logic                      |
| CJNE      | Compare and Jump if Not Equal  |
| CLR       | Clear                          |
| CPL       | Complement                     |
| DA        | Decimal Adjust                 |
| DEC       | Decrement                      |
| DIV       | Divide                         |
| DJNZ      | Decrement and Jump if Not Zero |
| INC       | Increment                      |
| JB        | Jump if Bit Set                |
| JBC       | Jump if Bit Set and Clear Bit  |
| JC        | Jump if Carry Set              |
| JMP       | Jump to Address                |
| JNB       | Jump if Not Bit Set            |
| JNC       | Jump if Carry Not Set          |
| JNZ       | Jump if Accumulator Not Zero   |
| JZ        | Jump if Accumulator Zero       |
| LCALL     | Long Call                      |
| LJMP      | Long Jump                      |
| MOV       | Move from Memory               |
| MOVC      | Move from Code Memory          |
| MOVB      | Move from Extended Memory      |
| MUL       | Multiply                       |
| NOP       | No Operation                   |
| ORL       | OR Logic                       |
| POP       | Pop Value From Stack           |
| PUSH      | Push Value Onto Stack          |
| RET       | Return From Subroutine         |

|      |                            |
|------|----------------------------|
| RETI | Return From Interrupt      |
| RL   | Rotate Left                |
| RLC  | Rotate Left through Carry  |
| RR   | Rotate Right               |
| RRC  | Rotate Right through Carry |
| SETB | Set Bit                    |
| SJMP | Short Jump                 |
| SUBB | Subtract With Borrow       |
| SWAP | Swap Nibbles               |
| XCH  | Exchange Bytes             |
| XCHD | Exchange Digits            |
| XRL  | Exclusive OR Logic         |