LAPORAN PRAKTIKUM SISTEM OPERASI



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**PROGRAM STUDI TEKNIK INFROMATIKA FAKULTAS KOMUNIKASI DAN INFORMATIKA UNIVERSITAS MUHAMMADIYAH SURAKARTA TAHUN 2021/2022**

Lembar Kerja Modul 1

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TUGAS

1. **Apa yang dimaksud dengan kode “ASCII”**

Kode **ASCII** ( ***A****merican* ***S****tandard* ***C****ode for* ***I****nformation* ***I****nterchange* ) adalah standar pengkodean karakter untuk alat komunikasi. Kebanyakan skema pengkodean karakter modern didasarkan pada ASCII, meskipun mereka mendukung banyak karakter tambahan.

Buatlah table kode ASCII standar dengan format angka decimal, binary dan heksadesimal serta karakter dan symbol yang dikodekan!.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Desimal** | **Heksadesimal** | **Binary** | **Simbol** | **Keterangan** |
| 0 | 00 | 00000000 | NUL | Null |
| 1 | 01 | 00000001 | SOH | Start of Header |
| 2 | 02 | 00000010 | STX | Start of Text |
| 3 | 03 | 00000011 | ETX | End of Text |
| 4 | 04 | 00000100 | EOT | End Of Transmission |
| 5 | 05 | 00000101 | ENQ | Enquiry |
| 6 | 06 | 00000110 | ACK | Acknowledge |
| 7 | 07 | 00000111 | BEL | Bell |
| 8 | 08 | 00001000 | BS | Backspace |
| 9 | 09 | 00001001 | HT | Horizontal Tab |
| 10 | 0A | 00001010 | LF | Line Feed |
| 11 | 0B | 00001011 | VT | Vertical Tab |
| 12 | 0C | 00001100 | FF | Form Feed |
| 13 | 0D | 00001101 | CR | Carriage Return |
| 14 | 0E | 00001110 | SO | Shift Out |
| 15 | 0F | 00001111 | SI | Shift In |
| 16 | 10 | 00010000 | DLE | Data Link Escape |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 17 | 11 | 00010001 | DC1 | Device Control 1 |
| 18 | 12 | 00010010 | DC2 | Device Control 2 |
| 19 | 13 | 00010011 | DC3 | Device Control 3 |
| 20 | 14 | 00010100 | DC4 | Device Control 4 |
| 21 | 15 | 00010101 | NAK | Negative Acknowledge |
| 22 | 16 | 00010110 | SYN | Synchronize |
| 23 | 17 | 00010111 | ETB | End of Transmission Block |
| 24 | 18 | 00011000 | CAN | Cancel |
| 25 | 19 | 00011001 | EM | End of Medium |
| 26 | 1A | 00011010 | SUB | Substitute |
| 27 | 1B | 00011011 | ESC | Escape |
| 28 | 1C | 00011100 | FS | File Separator |
| 29 | 1D | 00011101 | GS | Group Separator |
| 30 | 1E | 00011110 | RS | Record Separator |
| 31 | 1F | 00011111 | US | Unit Separator |
| 32 | 20 | 00100000 | SPACE | Space |
| 33 | 21 | 00100001 | ! | Exclamation Mark |
| 34 | 22 | 00100010 | “ | Double Quote |
| 35 | 23 | 00100011 | # | Number |
| 36 | 24 | 00100100 | $ | Dollar Sign |
| 37 | 25 | 00100101 | % | Percent |
| 38 | 26 | 00100110 | & | Ampersand |
| 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 | Capital A |
| 66 | 42 | 01000010 | B | Capital B |
| 67 | 43 | 01000011 | C | Capital C |
| 68 | 44 | 01000100 | D | Capital D |
| 69 | 45 | 01000101 | E | Capital E |
| 70 | 46 | 01000110 | F | Capital F |
| 71 | 47 | 01000111 | G | Capital G |
| 72 | 48 | 01001000 | H | Capital H |
| 73 | 49 | 01001001 | I | Capital I |
| 74 | 4A | 01001010 | J | Capital J |
| 75 | 4B | 01001011 | K | Capital K |
| 76 | 4C | 01001100 | L | Capital L |
| 77 | 4D | 01001101 | M | Capital M |
| 78 | 4E | 01001110 | N | Capital N |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 79 | 4F | 01001111 | O | Capital O |
| 80 | 50 | 01010000 | P | Capital P |
| 81 | 51 | 01010001 | Q | Capital Q |
| 82 | 52 | 01010010 | R | Capital R |
| 83 | 53 | 01010011 | S | Capital S |
| 84 | 54 | 01010100 | T | Capital T |
| 85 | 55 | 01010101 | U | Capital U |
| 86 | 56 | 01010110 | V | Capital V |
| 87 | 57 | 01010111 | W | Capital W |
| 88 | 58 | 01011000 | X | Capital X |
| 89 | 59 | 01011001 | Y | Capital Y |
| 90 | 5A | 01011010 | Z | Capital Z |
| 91 | 5B | 01011011 | [ | Left Square Breacket |
| 92 | 5C | 01011100 | \ | Blacklash |
| 93 | 5D | 01011101 | ] | Right Square Bracket |
| 94 | 5E | 01011110 | ^ | Caret / Circumflex |
| 95 | 5F | 01011111 | \_ | Underscore |
| 96 | 60 | 01100000 | ` | Greve / Accent |
| 97 | 61 | 01100001 | a | Small a |
| 98 | 62 | 01100010 | b | Small b |
| 99 | 63 | 01100011 | c | Small c |
| 100 | 64 | 01100100 | d | Small d |
| 101 | 65 | 01100101 | e | Small e |
| 102 | 66 | 01100110 | f | Small f |
| 103 | 67 | 01100111 | g | Small g |
| 104 | 68 | 01101000 | h | Small h |
| 105 | 69 | 01101001 | i | Small I |
| 106 | 6A | 01101010 | j | Small j |
| 107 | 6B | 01101011 | k | Small k |
| 108 | 6C | 01101100 | l | Small l |
| 109 | 6D | 01101101 | m | Small m |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 110 | 6E | 01101110 | n | Small n |
| 111 | 6F | 01101111 | o | Small o |
| 112 | 70 | 01110000 | p | Small p |
| 113 | 71 | 01110001 | q | Small q |
| 114 | 72 | 01110010 | r | Small r |
| 115 | 73 | 01110011 | s | Small s |
| 116 | 74 | 01110100 | t | Small t |
| 117 | 75 | 01110101 | u | Small u |
| 118 | 76 | 01110110 | v | Smallv |
| 119 | 77 | 01110111 | w | Small w |
| 120 | 78 | 01111000 | x | Small x |
| 121 | 79 | 01111001 | y | Small y |
| 122 | 7A | 01111010 | z | Small z |
| 123 | 7B | 01111011 | { | Left Curly Bracket |
| 124 | 7C | 01111100 | | | Vertical Bar |
| 125 | 7D | 01111110 | } | Right Curly Bracket |
| 126 | 7E | 01111110 | ~ | Tilde |
| 127 | 7F | 01111111 | DEL | Delete |

1. **Carilah daftar perintah bahasa assembly untuk mesin intel keluarga x86 lengkap.**

|  |  |
| --- | --- |
| **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 |

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| --- | --- |
| **Assembly Instruksi** | **Keterangan** |
| 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 |
| MOVX | 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 |