LAB PROGRAM 1 Binary Search

Charles Company

LAG Program

MODEL SMALL

MACRO TO DISPLAY THE MESSAGIS

DISPLAY MACRO MSG

LEA DX, MSG

MOV AND 094

INT 21H

ENOM

LIST DE DING OSN, OTH, 10H, 12H, 14H

NUMBER ERU (\$-UST)

KEY BB 012H

MEGI DE CON, DAM, EL ELEMENT FOUND IN THE

MSINZ DE OOK, OAK, et Scarch failed 1) Element un the list \$ 97

. CODE

START: MOV AXO @ DATA MOV DS AX

MOV CL, DON ; LOW VOLUE.

AGAIN : MOV SI , DEFSET UST

CMP CLOCH
JE NEXT

JNC FAILED

NEXT: MOV ALOCH

ADD ALOCH

SHR ALOCH

THOU BLOCK

XDR ANDAM

CLEAR AN

Came 3

MOV BP, AX

MOV AL, DS: CBPJESD

CMP AL, EEY ; Compone key & AEIJ

JE SUCCESS ; If Equal, Misplay incoming

MOV CH, BL ; If KEY TALIJ Shift high

OEC CH

JMP AGAIN

IN CLOW: MOV CLOBL ; IJ KEY! A[I] Shift how.

INC CL

JMP AGAIN

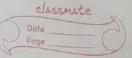
SOCESS: DISPLAY MOGIL

TMP FINAL

FAILED : DISPLAY M862 ; FOR EVA, terminate
FINAL: MOV AN, 4104
INT 214

END START

Bubble Sort

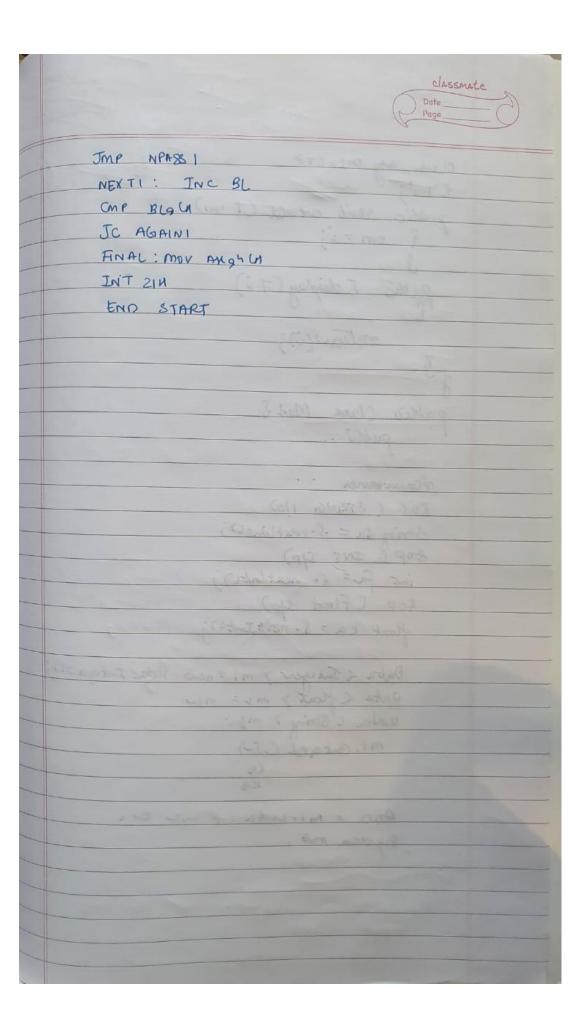


MODEL SMALL DISPLAY MACRO MSG LEA DX, MSG mov AM, 094 INT 214 ENDO . DATA LIST DB 024, 014, 344, 044, 094, 054 NUMBER EQU \$-LIST MSGI DB DDH 7 OAK 9 CC 177 SORT IN ASC \$ 27 MS42 PB OOM, OAM, " 27 SORT IN RES \$ " MS 43 DB DDH JOAK, " 3>> EXIT 5 " MSGY DBODY , DAM, " 4 >> ENTER A CHOICE \$ 97 MS45 DB OOK, DAM? " 5>> INVAUDS" START: MOV AX9 CRATA Mov D89 AX LEA SIGLIST mor cky NUMBER-1 DISPLAY MSGI DISPLAY MEGZ DISPLAY MS43 DISPLAY MSGY mor AMODIN INT 214 SUB AL, 304 CMP ALGOIN JE ASCORT CMP ALG OZH JE PESSORT CMP AL, DBH JE FINAL DISPLAY MEGS JMP FINAL

ASCORT: MOV BL, DOH

Classmate

AGAIN: MON SIQ OFFSET LIST MOV CLOOM mov Brown SUB BY9 BL NPASS: CMP CLIBA JNC NEXT MOV ALO [SI] mor BPO DIA (MP ALAPS: [BP][SE] JC_NOPE MI TANKET 30 XCHG AL, [SI+1] XCHG [SI] AL NOPE : ING CL INC SIT JMP NPASS NEXT: INC BL CMP BLOCK JC AGAIN JMP FINAL DESSORT: MOV BL900H AGMINI: MOV SI, 6FFSET LIST MOV CL, DOX mov Bugu SUB BHOBL NPASSI: CMP CLOBA JNC NEXT mov ALO [SI] MOV BPO DIN CMP ALD OS: [BP][SI] JNC_NOPE1 XCHG AL, [SI+] XCHNG [SI] AL NOPEL: INC SI



| 1 | TASCII SURYAGOIA |
|---|--|
| | . Mode L Small |
| | data |
| | mag 1 db oats cen see Enter alphanumeric charses |
| | res dt 02 dupco |
| | · Code |
| | mov ax, @ data |
| | 1300 ds, 50 |
| | Call disp |
| | |
| | mov ah oth |
| | that the same of t |
| | mov deal |
| | shr alock |
| | Comp al, Oak |
| | JC digit |
| | ADD AL 20TH |
| | oligit: add als 30h |
| | mov res, al |
| | and by of h |
| | Comp Hen Dah |
| | JC digitz |
| | add 61, 01h |
| | digit: add its, 3 oh |
| | mox 768+19 41 |
| | 2013 |
| | mey ake ook |
| | mov al, 03h ; TEXT MODE |
| | rino 10h |
| | |
| | mor any or ; set the woor pas |
| | may blue ook 5 Page up |
| | MAN OCH 3 POLL CAR IN THE |
| | mov the poh ; Page no nov dh, Och i Pour Coo is top mov dl , 28h ; Column Val int 10h |

mor 7012, 050 dea dy , Tes mor aha tich ent 21h dis p proc thear mor alg oak list 21 h ret disp endp end

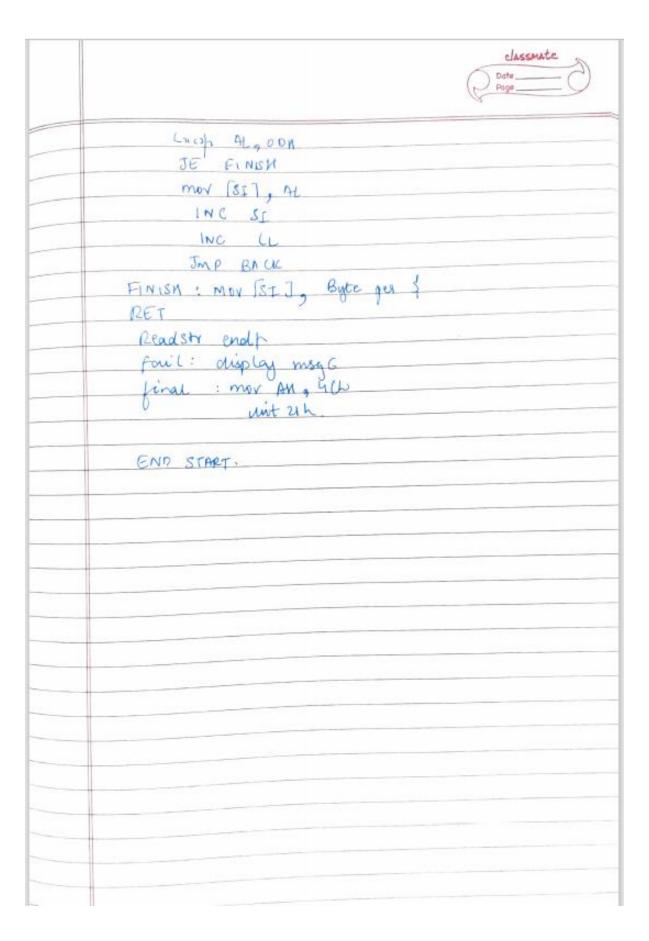
| | 11 PALINDROME SURYAGOID |
|---|--|
| | MOREL SMALL |
| | DISPLAY MACED MISTO |
| 4 | LEA DX 2 MSG2 |
| Ì | MOV AH, 09 H |
| | INT 214 |
| | ENDM |
| | . Data |
| | M SGI DE OPM , OFM , et Enter String : 500 |
| | MSG2 DB DON , OAN, "REVUSE String: 5" |
| 1 | MS G3 DB ODK, OAK, ip strong is pallindrome , |
| 4 | MS GY DO OPH, DAN CELL String is not a polisions |
| 1 | string. ion |
| 1 | String DB 8DH DUP (2) |
| ı | estring of 80H DUP (2) |
| ı | · Code |
| ı | START: MOV AX , @ Data |
| | Mov Ps, AX |
| 1 | DIS PLAY MSG2 |
| 4 | 3 Take the String keyboar chily ch |
| 4 | XDE CLOCK |
| 4 | AGain: MOV ANG DIM |
| 1 | INT 21M |
| 4 | CMP AL + DOH |
| 1 | JE NEXT |
| 1 | MOV [SI] , AL |
| 1 | ING ST |
| 4 | INC CL |
| | JMP AGAIN |
| | NEXT: MON TAIT, BYTE PTR "5" |
| | ; String input over |
| | D EL SI |
| 1 | MOV CHOCL |

| old | (Dei |
|--------------|--|
| | MOV PI, OFFSET RSTRING |
| | BACK: MOV AL (ST) IBMELT |
| | MOV [DI] AL |
| | DEC EI |
| | INC DI |
| | DEC CH |
| | JN2 BAC |
| | MOY MIJ, BYTE ITR C'S? |
| | DISPLAY MS42 |
| 2. 39 | DISPLAY ESTRING |
| polisolio 18 | MOV STO OFFSET STRING |
| Provide St. | MOV DI, OFFSET RSTRING |
| | AG: MOV ALO [SI]; BMSE Madam |
| | mov AL, [DI]; ESSMB madem |
| | JNE FAIL |
| | ING SI |
| | ING DI |
| | DFC CX |
| | JZ SUCESS |
| | JMP AG |
| | FAIL ; DISPLAY MEG 4 |
| | JMP FINAL |
| | SUCERS: DISPLAY MS43 |
| _ | FINAL: MOV ANGLIN |
| | INT 214 |
| | ENO |
| | Mary Mary Mary |
| | Share was a mark to the same |
| | |
| | |
| | 20 20 20 20 20 20 20 20 20 20 20 20 20 2 |
| m. | |
| Strup | |

| | classmate |
|---|---|
| | Date Page |
| - | String Campare: |
| | . mode small |
| _ | disolar mouse men |
| | lea da mag |
| | mov Augogy |
| | INT 244 |
| | ENDM |
| | data |
| | mag 2 db odh 20An ec Enter Kont String 5 \$ 90 msg 2 db odh 20An ec Enter 2nd string 5 \$ 90 |
| | msg 2 de odh 90An ec Enter 2nd string 5 } |
| | mag 4 dt polly DAN et penatte of 2 String 5 5 2 |
| | mags dt odhjoan ee Are equal . g 000 |
| | msg3 alt odh o AM e Length of Istring s \$ 97 msg4 dt odh o AM ec Length of 2 String s 5 97 msg5 dt odh o OM ee Are Equal of 99 msg6 dk odh o OM e Are unequal \$ 99 |
| | String 1 dt 80h dup (?) |
| | String 2 dt 80h dup (?) String 2 dt 80h dup (?) |
| | |
| | STRET: mor ax, Edata |
| | nov ds, an |
| - | display mag 1 |
| | may Sto offset String! |
| | mov Myll |
| _ | display mag 2 |
| | mov SI, ffeet string2 |
| | Pugn Bx |
| | Push CX |
| L | display ms g 3 |

Date Poge

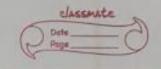
| | | Pose |
|---------|-------------------------|------|
| <u></u> | mor Al, Cl | |
| | Call den-des | |
| | pop cx | |
| | | |
| | pop bx | |
| | Comp agas | |
| | JNE FAIL | |
| | MOV SI, OFFST I STRING! | |
| | MOV DI, OFFSET STRINGS | |
| | Clp | |
| | Culc: mov Alg [SI] | |
| | mor At, (DI) | |
| | JNE FAIL | |
| | INC SI | |
| <u></u> | LNC BY | |
| | dec a | |
| | JN2 CHL | |
| | display mag 5 | |
| | JMP FINAL | |
| | Len-dip Proc New | |
| | YOR ANOTH | |
| | ADD ALGOOM | |
| | MAM | |
| | ADD AX, 3030M | |
| | mov Br, AL | |
| - | mov AH + 02H | |
| | INT UN | |
| - | Ret | |
| - | ten-dis endy | |
| 6 | readstr proc new | |
| | NOR aga | |
| | BOOKS : MON ALGOLY | |
| | INT 2M | |
| and a | | |



NCR model small . data n dw 4 of dw 2 nor dw o . code mor ax, @data mor do ax mor axon mov dxor Call nor pro Call disp jmp final ner pro proc near emp are fx Je rest comp box, o je rest comp borg 1 je resu dec an comp tragax Je inco push ax Call no pro

| | | classmate | |
|---|-----------------------|-----------|--|
| | | Date Page | |
| | pop ba | | |
| | pop ar | | |
| | dec ba | | |
| | push ax | | |
| | Call heapon | | |
| | pop ton | | |
| | pop an | | |
| | rek | | |
| | reol : inc ncr | | |
| | ret ne | | |
| | inco inc nex | | |
| | resn: add norgax | | |
| | ret | | |
| | ncopro endh | | |
| | disp pros near | | |
| | mor stra g non | | |
| | mor allow the | | |
| | mov oh 9 ozh | | |
| | unt 21h | | |
| | mov dly bl | | |
| | mor ahgorh | | |
| | unt 21h | | |
| | reb | | |
| _ | disp endp | | |
| | Final 1 mor also lich | | |
| | unt 21 h | | |

| | TIME | |
|---|--------------------------------|----------|
| 1 | | Day. |
| | Al-am Carall | In Sales |
| | MODEL SMALL | |
| - | DISPLAY MACAD MISLA | |
| - | LEA DX , MSG | |
| | MOV AK, OGH | |
| - | INT 21X | |
| - | ENRM | |
| | PATA | |
| - | TIMESTE DE OZON DUP(?) | |
| - | MSGI DB CC Current Time": \$ " | |
| | . Cools | |
| | Start: Mov Ax a @ pata | |
| | Mov os , AX | |
| - | | |
| - | Mov My DOM | |
| - | MOV AL 9 03H | |
| - | INT ION | |
| | AG: MOV BH, DOH | |
| | mov Bng olm | |
| | MOU DL 901H | |
| | MOV ANGELH | - |
| | IN I IDH | |
| | MOV SIO Offset Timesty | - |
| | mey Alla 2 CH | |
| | INT 21H | |
| | mov Alg CM | - |
| 1 | AA M | |
| | ADD AX 9 3080 H | |
| | MOV SSIJ9 AH | |
| | INC SI | |



MOV [SI] , AL

TWO SI

MOV [SI], BYTE PTR ";"

JNC SI

MOV ACODY

AAM

AAD AXO 30300

MOV [SI], AN

INC SI

MOV [SI], AL

INC SI

MOV [SI], BYTE PTR E & 9

DISPLAY MEGT

MOV AMA DON

IN 7 21H

CMP ALA DOH

JE A IA

FINAL: MOV AMA YUM

INT ZIM

END.

| | | Doce |
|----|---------------------|------------------------|
| ~ | Desimal up Counter: | Contract of the second |
| - | MODEL Small | |
| | · co de | |
| ~- | mov Aug 24 | |
| | INT 21H | |
| | | |
| - | mov AL2 UN | |
| _ | AA M | |
| | may Bx, Ax | |
| | CALL DISP | |
| | mov ol , 5 | |
| | Mor Ang DZH | |
| | INT 21X | |
| | Mer -Alg U | |
| | AAM | |
| _ | | |
| | mov Alg ON | |
| | AAM | |
| | mov BX, AX | |
| | CALL DISP | |
| | | |
| | May AND 4CM | |
| _ | LN7 ZIM | |
| | disp proc near | |
| | add all a son | |
| | mor dly bl | |
| | add dlg 30 h | |
| | mor algozh | |
| | wit 21h | |
| | act disp ented and | |
| | | |
| | | |

Cursor

| | X-Y-Condunate Curroy |
|---|---|
| | The turney |
| | · model |
| | · model small |
| | DISP MACRO MEG LEA DX MEG |
| | May AH 2 09H |
| | INT 214 |
| | ENO M |
| | |
| | - Data |
| | ROW D8 02 OUP (0) |
| | eo L 08 02 00P (b) |
| | m80 1 00 000 (s) |
| | MSG 2 OB DOW, DAM, ce Enter -X - Coordinate, 500 |
| | TO OTHER DOLL OF THE OTHER DESIGNATION OF THE |
| | Msh 3 DB ODH, OAN, ee Cursor displayed of 5 97 |
| | Coole |
| | Mov Ax, @ Pata |
| | MOV DE, AX |
| | DISP MSGI |
| | MOV 819 OFFSET ROW |
| | CALL READ |
| | DISP M84 2 |
| | MOV SIG OFFSET COL |
| | CALL READ |
| | moy SI, OFFSET ROLD |
| | may 943 644 row |
| | INC 8T |
| - | mov AL, CII] |
| | SUB AX, 3080H |
| | AAD |
| | |
| | |

MANY CHES. ST. MI ST ATTERS WITH 441 My 352 THIS \$2 Mes ALA SEE 308 Ac + 3090 W says. may algain 1166 HAND MAI HA BO 187 108 MAY PRASSE MT 154 THP FOULL LEGO PER MEAR MAN CK - FEW gage: Mar sayout 187 218 MAR [12] , AL 180 EZ DEC CX JN 2 BAUL RET READ END FIRST : MOV BHYSIK 100 T 21K MOV AM 9 4 CA INT ZEM END.

FILE CREATE

| | Classmate Diete |
|---|--|
| | . MODEL SMALC |
| | PISP MACRO MICH |
| | LEA MX DX, MSG |
| | Mov An, Dan |
| | INT 21H |
| | ENPM |
| | . Oata |
| | MSGN DB ODM, DAM, et Enter file nowne for Greation: MSGN DB ODM, DAM, et File Greated Successfully 3") MSGN DB ODM, DAM, et (Yeation failed 500 mm deletion MSGN 4 DB ODM, DAM, et File deleted Successfully 3") MSGN 5 DB ODM, DAM, et File deleted Successfully 3" MSGN 5 DB ODM, DAM, et I |
| | MSINZ PB ORNO DAXO CE File (neated Jucensully 30) |
| | MSU3 OB OPH DAY & (reation toxiled 50) deletion |
| | MSG 4 DB ODY DAM of File deleted Successfully 3 |
| | Man 5 ng opngonu, " 1 |
| | MSG G DB ON JOAN, ec peletion failed ()? |
| | FNAMEL DB 10 DUP (0) |
| | FNAME 2 08 10 00P(0) |
| | coole |
| | Mov Ax , @ Data |
| | May Pagay |
| | DISP MSG 1 |
| | Mby STapp |
| | Back 2: MOV ANDOLK |
| | INT 214 |
| | CMF AL GODY |
| | JE NEXT 1 |
| | May FNAME 1 [SI], AL |
| 1 | ING SI |
| - | THE BACKS - 122 |
| 1 | NEXT: MOX ENAME 1 [SI] + C\$? |
| - | Let Exp |
| - | MOV CX 700 |

| | Pall Call |
|---|------------------------------|
| | MOV AM, BOIL |
| | INT 21K |
| | JC (FAIL |
| | DISP MSG 2 |
| - | JMP PEL |
| | CFAIL : DISP MSG3 |
| - | |
| | DEL: DISP MIGH |
| - | WW 72+00 |
| | BACK 2 : MON AND OTH |
| | INT 21H |
| | CMP AL, DON |
| - | JE NEXT2 |
| | MON FNAMERINE JAL |
| | INC 81 |
| | JMP BACKS |
| | |
| | NEKTZ: MOV FNAMEZ[SI], = 3) |
| | LEA PX, FNAMEZ |
| | |
| | Mov Ax 9 HIX |
| | INT 21M |
| | CMP ALGORN |
| | JE NEXT 2 |
| | MOV FNAMEZ[SI], AL |
| | INC ST |
| | JMP BALKS |
| | 5111 5011111 |
| | NEXT A: MOV FRAMERISI] \$ 9 |
| | LEA DX, ENAMER |
| | Mov An, 41m |
| | INT 217 |
| | |

