ASSEMBLLY CODE:

```
.MODEL SMALL
.STACK 100H
.DATA
    MSGA DB 'First Choice: $'
    MSGB DB 'Second Choice: $'
    MSGC DB 'Third Choice: $'
    MSGD DB 'The Diffrent Choice Winer: $'
    P_S DB '* $'
    P_A DB 'A $'
    p_B DB 'B $'
    P_C DB 'C $'
    NEW_L DB 13,10,'$'
    COUNT DB ?
    A DW ?
    B DW ?
    C DW ?
    TEMP DW ?

.CODE
MAIN PROC
    MOV AX,@DATA
    MOV DS,AX

RAND_IO:
    MOV COUNT,3
    LEA DX,MSGA                     ;Print 'First Choice:'
    MOV AH,9
    INT 21H

    GET_INPUTS:
        MOV DX,0
        MOV BX,0                    ;Clear bx
        MOV AH,1
        INT 21H
        CMP AL,0DH
        JE END_INPUTS               ;If enter

        CONVERT_TO_NUM:
            AND AX,000FH            ;Use full 16 bits of AX
            MOV TEMP,AX
            MOV AX,10
            MUL BX
            MOV BX, AX
            ADD BX,TEMP

        MOV AH,1                    ;Input new digit
        INT 21H
        CMP AL,0DH
        JNE CONVERT_TO_NUM

        END_INPUTS:
            CMP COUNT,3
            JE GET_A

            CMP COUNT,2
            JE GET_B

            CMP COUNT,1
            JE GET_C

            GET_A:
                MOV A,BX
                LEA DX,MSGB         ;Print 'Second choice: '
                MOV AH,9
```

```
            INT 21H
            DEC COUNT
            JMP GET_INPUTS


        GET_B:
            MOV B,BX
            LEA DX,MSGC          ;Print 'Third choice: '
            MOV AH,9
            INT 21H
            DEC COUNT
            JMP GET_INPUTS

        GET_C:
            MOV C,BX

LEA DX,MSGD                      ;print The Diffrent Choice Winer:
MOV AH,9
INT 21H

GET_RESULTS:
    MOV AX,A
    CMP AX,B                     ;Compaire A and B
    JE CMP_ABC                   ;if A+B print C

        MOV BX,B
        CMP BX,C                 ;Compair B and C
        JE PRINT_A               ;if b = C print A

            MOV AX,A
            CMP AX,C             ;Compair A and C
            JE PRINT_B           ;if A = C print B

            JMP NEW_INPUT

    CMP_ABC:
        CMP AX,C                 ;Compair B & C after checking A = B
        JE PRINT_STAR
        JMP PRINT_C

PRINT_A:
    LEA DX,P_A
    MOV AH,9
    INT 21H
    JMP NEW_INPUT

PRINT_B:
    LEA DX,P_B
    MOV AH,9
    INT 21H
    JMP NEW_INPUT

PRINT_C:
    LEA DX,P_C
    MOV AH,9
    INT 21H
    JMP NEW_INPUT

PRINT_STAR:
    LEA DX,P_S
    MOV AH,9
    INT 21H
    JMP NEW_INPUT

NEW_INPUT:
    LEA DX,NEW_L
```

```
            MOV AH,9
            INT 21H
            JMP RAND_IO

    MAIN ENDP
        END MAIN
```