```c
#include <stdio.h> // for printf()
#include <conio.h> //for getch()

int main(void)
{
    //variable declarations
    int a, b;
    int result;

    char option, option_division;

    //code
    printf("\n\n");

    printf("Enter Value For 'A' : ");
    scanf("%d", &a);

    printf("Enter Value For 'B' : ");
    scanf("%d", &b);

    printf("Enter Option In Character : \n\n");
    printf("'A' or 'a' For Addition : \n");
    printf("'S' or 's' For Subtraction : \n");
    printf("'M' or 'm' For Multiplication : \n");
    printf("'D' or 'd' For Division : \n\n");

    printf("Enter Option : ");
    option = getch();

    printf("\n\n");

    switch (option)
    {
    // FALL THROUGH CONSITION FOR 'A' and 'a'
    case 'A':
    case 'a':
        result = a + b;
        printf("Addition Of A = %d And B = %d Gives Result %d !!!\n\n", a, b,
          result);
        break;

    // FALL THROUGH CONSITION FOR 'S' and 's'
    case 'S':
    case 's':
        if (a >= b)
        {
            result = a - b;
            printf("Subtraction Of B = %d From A = %d Gives Result %d !!!\n\n",
              b, a, result);
        }
        else
        {
```

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51              result = b - a;
52              printf("Subtraction Of A = %d From B = %d Gives Result %d !!!\n\n",
                  a, b, result);
53          }
54          break;
55
56      // FALL THROUGH CONSITION FOR 'M' and 'm'
57      case 'M':
58      case 'm':
59          result = a * b;
60          printf("Multiplication Of A = %d And B = %d Gives Result %d !!!\n\n", a,
              b, result);
61          break;
62
63      // FALL THROUGH CONSITION FOR 'D' and 'd'
64      case 'D':
65      case 'd':
66          printf("Enter Option In Character : \n\n");
67          printf("'Q' or 'q' or '/' For Quotient Upon Division : \n");
68          printf("'R' or 'r' or '%%' For Remainder Upon Division : \n");
69
70          printf("Enter Option : ");
71          option_division = getch();
72
73          printf("\n\n");
74
75          switch (option_division)
76          {
77          // FALL THROUGH CONSITION FOR 'Q' and 'q' and '/'
78          case 'Q':
79          case 'q':
80          case '/':
81              if (a >= b)
82              {
83                  result = a / b;
84                  printf("Division Of A = %d By B = %d Gives Quotient = %d !!!\n
                      \n", a, b, result);
85              }
86              else
87              {
88                  result = b / a;
89                  printf("Division Of B = %d By A = %d Gives Quotient = %d !!!\n
                      \n", b, a, result);
90              }
91              break; // 'break' of case 'Q' or case 'q' or case '/'
92
93         // FALL THROUGH CONSITION FOR 'R' and 'r' and '%'
94          case 'R':
95          case 'r':
96          case '%':
97              if (a >= b)
98              {
```

```
 99                  result = a % b;
100                  printf("Division Of A = %d By B = %d Gives Remainder = %d !!!\n
                       \n", a, b, result);
101              }
102              else
103              {
104                  result = b % a;
105                  printf("Division Of B = %d By A = %d Gives Remainder = %d !!!\n
                       \n", b, a, result);
106              }
107              break; // 'break' of case 'R' or case 'r' or case '%'
108
109          default: // 'default' case for switch(option_division)
110              printf("Invalid Character %c Entered For Division !!! Please Try
                   Again...\n\n", option_division);
111              break; // 'break' of 'default' of switch(option_division)
112
113          } // ending curly brace of switch(option_division)
114
115          break; // 'break' of case 'D' or case 'd'
116
117      default: // 'default' case for switch (option)
118          printf("Invalid Character %c Entered !!! Please Try Again...\n\n",
               option);
119          break;
120      } // ending curly brace of switch(option)
121
122      printf("Switch Case Block Complete !!!\n");
123
124      return(0);
125  }
126
```