```c
#include <stdio.h>
#include <stdlib.h>
#include <conio.h>
#include <math.h>

void ma(opt2)
{

    int n1, n2;
    float res;
    system("cls");

    if (opt2 == '/')
    {
        printf(" You have selected: Division");
    }
    else if (opt2 == '*')
    {
        printf(" You have selected: Multiplication");
    }

    else if (opt2 == '-')
    {
        printf(" You have selected: Subtraction");
    }
    else if (opt2 == '+')
    {
        printf(" You have selected: Addition");
    }
    printf(" \n Enter the first number: ");
    scanf(" %d", &n1);
    printf(" Enter the second number: ");
    scanf(" %d", &n2);

    switch (opt2)
    {
    case '+':
```

```
38          res = n1 + n2;
39          printf(" Addition of %d and %d is: %.2f", n1, n2,
40  res);
41          break;
42
43      case '-':
44          res = n1 - n2;
45          printf(" Subtraction of %d and %d is: %.2f", n1,
46  n2, res);
47          break;
48
49      case '*':
50          res = n1 * n2;
51          printf(" Multiplication of %d and %d is: %.2f", n1,
52  n2, res);
53          break;
54
55      case '/':
56          if (n2 == 0)
57          {
58              printf(" \n Divisor cannot be zero. Please
59  enter another value ");
60              scanf("%d", &n2);
61          }
62          res = n1 / n2;
63          printf(" Division of %d and %d is: %.2f", n1, n2,
64  res);
65          break;
66      default:
67          printf(" Something is wrong!! Please check the
68  options ");
69      }
70      char e;
71      printf("\n are you want to exit (y/n):");
72      scanf(" %c", &e);
73      if (e == 'n')
74      {
```

```
75          main();
76      }
77      else
78      {
79          return 0;
80      }
81  }
82
83  int fac()
84  {
85      int n, i;
86      unsigned long long fact = 1;
87      printf("Enter an integer: ");
88      scanf("%d", &n);
89
90      if (n < 0)
91          printf("Error! Factorial of a negative number
92  doesn't exist.");
93      else
94      {
95          for (i = 1; i <= n; ++i)
96          {
97              fact *= i;
98          }
99          printf("Factorial of %d = %llu", n, fact);
100     }
101     char e;
102     printf("\n are you want to exit (y/n):");
103     scanf(" %c", &e);
104     if (e == 'n')
105     {
106         main();
107     }
108     else
109     {
110         return 0;
111     }
```

```c
}

void sqroot()
{
    {
        double number, squareRoot;

        printf("Enter a number: ");
        scanf("%lf", &number);

        squareRoot = sqrt(number);

        printf("Square root of %.2lf =  %.2lf", number,
        squareRoot);
        char e;
        printf("\n are you want to exit (y/n):");
        scanf(" %c", &e);
        if (e == 'n')
        {
            main();
        }
        else
        {
            return 0;
        }
    }
}

void power()
{
    int base, exp;
    double result;
    printf("Enter a base number: ");
    scanf("%d", &base);
    printf("Enter an power: ");
    scanf("%d", &exp);

```

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149         result = pow(base, exp);
150         printf("Answer = %.2lf", result);
151         char e;
152         printf("\n are you want to exit (y/n):");
153         scanf(" %c", &e);
154         if (e == 'n')
155         {
156             main();
157         }
158         else
159         {
160             return 0;
161         }
162     }
163
164     void per()
165     {
166         system("cls");
167         float percentage;
168         int mainN, smal;
169
170         printf("enter total number:");
171         scanf(" %d", &mainN);
172         system("cls");
173         printf("Input Percentage number for %d :", mainN);
174         scanf(" %d", &smal);
175
176         percentage = (float)smal / mainN * 100.0;
177
178         printf("Percentage = %.2f%%", percentage);
179
180         char e;
181         printf("\n are you want to exit (y/n):");
182         scanf(" %c", &e);
183         if (e == 'n')
184         {
185             main();
```

```
186         }
187         else
188         {
189             return 0;
190         }
191     }
192
193     int main()
194     {
195         system("cls");
196         int option;
197         printf("choose an operation \n");
198         printf("\n");
199         printf("[1]calculate with + , - , * , /   \n");
200         printf("[2]calculate factorial  \n");
201         printf("[3]calculate squareRoot \n");
202         printf("[4]calculate square \n");
203         printf("[5]calculate Percentage \n");
204         printf("enter the number for operation:");
205         scanf("%d", &option);
206         system("cls");
207         char opt;
208         switch (option)
209         {
210         case 1:
211             printf("Choose an operator(+, -, *, /) to perform
212              the operation in C Calculator:");
213             scanf(" %c", &opt);
214             ma(opt);
215             break;
216         case 2:
217             fac();
218             break;
219         case 3:
220             sqroot();
221             break;
222         case 4:
```

```
            power();
            break;
        case 5:
            per();
            break;
        default:
            printf("ok");
        }

        return 0;
    };


```