**SOURCE CODE**

```
#include <stdio.h>
int main() {
  printf("Hello World\n");
  return 0;
}
```

---

**OUTPUT**

```
Hello World
```

---

**SOURCE CODE**

```
#include <stdio.h>
int main() {
  int a, b, sum;
  printf("Input two numbers:\n");
  scanf("%d %d", &a, &b);
  sum = a + b;
  printf("Sum of %d and %d is %d.\n", a, b, sum);
  return 0;
}
```

---

**OUTPUT**

```
Input two numbers:
64 36
Sum of 64 and 36 is 100.
```

---

**SOURCE CODE**

```
#include <stdio.h>
int main() {
  int radius;
  float area;
  printf("Input radius of the circle:\n");
  scanf("%d", &radius);
  area = 3.14 * radius * radius;
  printf("Area of the circle with radius %d is %f.\n", radius, area);
  return 0;
}
```

---

**OUTPUT**

```
Input radius of the circle:
12
Area of the circle with radius 12 is 452.160004.
```

---

**SOURCE CODE**

```
#include <stdio.h>
int main() {
  int height, base;
  float area;
  printf("Enter the length of base and height respectively:\n");
  scanf("%d %d", &base, &height);
  area = base * height * 0.5;
  printf("Area of the triangle with base %d and height %d is %f.\n", base,
          height, area);
  return 0;
}
```

---

**OUTPUT**

```
Enter the length of base and height respectively:
4 12
Area of the triangle with base 4 and height 12 is 24.000000.
```

---

**SOURCE CODE**

```
#include <stdio.h>
int main() {
  int a, b, c;
  printf("Enter three numbers:\n");
  scanf("%d %d %d", &a, &b, &c);
  if (a > b) {
     if (a > c) {
     printf("The largest number is %d.\n", a);
     } else {
     printf("The largest number is %d.\n", c);
     }
  } else {
     if (b > c) {
     printf("The largest number is %d.\n", b);
     } else {
     printf("The largest number is %d.\n", c);
     }
  }
}
```

---

**OUTPUT**

```
Enter three numbers:
14 7 11
The largest number is 14.
```

---

**SOURCE CODE**

```
#include <stdio.h>
int main() {
```

```
  int year;
  printf("Enter year:\n");
  scanf("%d", &year);
  if (year % 4 == 0 && year % 100 != 0 || year % 400 == 0) {
     printf("%d is a leap year.\n", year);
  } else {
     printf("%d is not a leap year.\n", year);
  }
  return 0;
}
```

---

**OUTPUT**

```
Enter year:
2004
2004 is a leap year.
```

---

**SOURCE CODE**

```
#include <stdio.h>
int main() {
  int grade;
  printf("Enter Grade:\n");
  scanf("%d", &grade);
  switch (grade / 10) {
  case 10:
  case 9:
     printf("Grade A+\n");
     break;
  case 8:
     printf("Grade A\n");
     break;
  case 7:
     printf("Grade B\n");
     break;
  case 6:
     printf("Grade C\n");
     break;
  case 5:
     printf("Grade D\n");
     break;
  case 4:
  case 3:
  case 2:
  case 1:
  case 0:
     printf("Grade F\n");
     break;
```

```
  default:
     printf("Something went wrong\n");
     break;
  }
  return 0;
}
```

---

**OUTPUT**

```
Enter Grade:
98
Grade A+
```

---

**SOURCE CODE**

```
#include <stdio.h>
int main() {
  int N, i = 2, flag = 1;
  printf("Enter natural number:\n");
  scanf("%d", &N);
  if (N == 1 || N == 0) {
     printf("%d is neither prime nor composite.\n", N);
  } else {
     while (i < (N / 2)) {
     if (N % i == 0) {
     flag = 0;
     break;
     } else {
     i = i + 1;
     }
     }
     if (flag == 1) {
     printf("%d is a prime number.\n", N);
     } else {
     printf("%d is a composite number.\n", N);
     }
  }
  return 0;
}
```

---

**OUTPUT**

```
Enter natural number:
97
97 is a prime number.
```

---

**SOURCE CODE**

```
#include <math.h>
#include <stdio.h>
int main() {
```

```
  int a, s = 0, b, c = 0;
  printf("Enter Number:\n");
  scanf("%d", &a);
  b = a;
  while (a > 0) {
     a = a / 10;
     c = c + 1;
  }
  a = b;
  while (a > 0) {
     s = s + pow((a % 10), c);
     a = a / 10;
  }
  if (b == s) {
     printf("%d is an armstrong number.\n", b);
  } else {
     printf("%d is not an armstrong number.\n", b);
  }
}
```

---

**OUTPUT**

```
Enter Number:
153
153 is an armstrong number.
```

---

**SOURCE CODE**

```
#include <stdio.h>
int main() {
  int first = 0, second = 0, input;
  while (1) {
     printf("Input number:\n");
     scanf("%d", &input);
     if (input > first) {
     second = first;
     first = input;
     } else if (input > second) {
     second = input;
     }
     printf("Do you want to input more numbers?\n- 1 for Yes\n- 2 for No\n");
     scanf("%d", &input);
     if (input == 1) {
     continue;
     } else {
     printf("Second largest number is %d.\n", second);
     break;
     return 0;
```

```
    }
  }
}
```

---

**OUTPUT**

```
Input number:
53
Do you want to input more numbers?
- 1 for Yes
- 2 for No
1
Input number:
25
Do you want to input more numbers?
- 1 for Yes
- 2 for No
1
Input number:
98
Do you want to input more numbers?
- 1 for Yes
- 2 for No
2
Second largest number is 53.
```