

ANALYSIS^{WITH}PROGRAMMING

cout << "let's do some analysis and programming" << endl;

<http://alstatr.blogspot.com/>

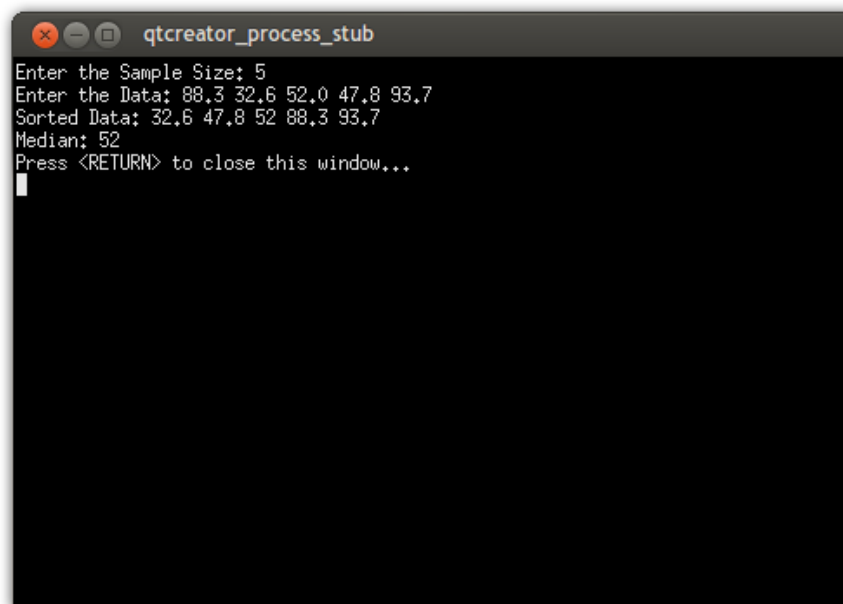
MEDIAN

C/C++ Programming

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Output:



```
qtcreator_process_stub
Enter the Sample Size: 5
Enter the Data: 88.3 32.6 52.0 47.8 93.7
Sorted Data: 32.6 47.8 52 88.3 93.7
Median: 52
Press <RETURN> to close this window...
```

C Codes:

```
#include<stdio.h>

int main()
{
    int i, j, n;
    float temp, median;

    printf("Enter the Sample Size: ");
    scanf("%d", &n);

    float x[n];
    printf("Enter the Data: ");
    for(i = 1; i <= n; ++i){
        scanf("%f", &x[i]);
```

```
}

/*Sort the Data*/
for(i = 1; i <= n; ++i){
    for(j = i + 1; j <= n; ++j){
        if(x[i] > x[j]){
            temp = x[i];
            x[i] = x[j];
            x[j] = temp;
        }
    }
}

/*Sorted Data*/
printf("Sorted Data: ");
for(i = 1; i <= n; ++i){
    printf("%2.2f ", x[i]);
}
printf("\n");

/*Compute the Median*/
if(n % 2 == 0){
    median = (x[n / 2] + x[n / 2 + 1]) / 2;
}
else{
    median = x[n / 2 + 1];
}

printf("Median: %2.2f\n", median);

return 0;
}
```

C++ Codes:

```
#include<iostream>
#include<iomanip>

using namespace std;

int main()
{
    int i, j, n;
    float temp, median;

    cout << "Enter the Sample Size: ";
    cin >> n;
```

```
float x[n];
cout << "Enter the Data: ";
for(i = 1; i <= n; ++i){
    cin >> x[i];
}

/*Sort the Data*/
for(i = 1; i <= n; ++i){
    for(j = i + 1; j <= n; ++j){
        if(x[i] > x[j]){
            temp = x[i];
            x[i] = x[j];
            x[j] = temp;
        }
    }
}

/*Sorted Data*/
cout << "Sorted Data: ";
for(i = 1; i <= n; ++i){
    cout << x[i] << " ";
}

/*Compute the Median*/
if(n % 2 == 0){
    median = (x[n / 2] + x[n / 2 + 1]) / 2;
}
else{
    median = x[n / 2 + 1];
}

cout << endl;
cout << "Median: " << setprecision(4) << median << endl;

return 0;
}
```

Labels

C and CPP, Descriptive Statistics,