

Sound of Music

Alert

- Let's try to make some noise to alert the user.
- There are some special characters for cout:
 - '\t' TAB
 - '\n' New line
 - '\a' Alert

```
#include <iostream>
```

```
int main()  
{  
    std::cout << '\a';  
    return 0;  
}
```

More Alerts

```
#include <iostream>

int main()
{
    for (int i=0; i<10; i++)
        std::cout << '\a';
    return 0;
}
```

Pause

```
#include <iostream>
#include <Windows.h>
#include <WinBase.h>

int main()
{
    for (int i=0; i<10; i++)
    {
        std::cout << '\a';
        Sleep(1000);        // milli-second
    }
    return 0;
}
```

MessageBeep function

```
#include <iostream>
#include <Windows.h>
#include <WinBase.h>
int main()
{

    for (int i=0; i<10; i++)
    {
        MessageBeep(MB_ICONASTERISK);
    }
    return 0;
}
```

WARNING
OK
ASTERISK

To Change the Default Sound

- Control Panel – Sound
 - Choose the 3rd tab (Sounds)
 - In “Program Events” frame, replace the WAV file corresponding to Asterisk from “Windows Error.wav” to “[Beethoven_No5_Symphony.wav](#)”.
 - You may customize your logon music in similar way, too.
- However, this does not guarantee that the same music will be played in another PC. So we have the following function call.

PlaySound () function

```
#include <Windows.h>
#include <Mmsystem.h>

int main()
{
    PlaySound(TEXT("Beethovens_5th_Symphony.wav"),
        NULL, SND_FILENAME);
    // Alt-F7 - Linker - Input
    // In "Additional Dependencies", insert "winmm.lib"
    return 0;
}
```

Compose a Melody by Yourself

	Frequency (Hz)	x2
A (La)	220.00	440.00
B (Si)	246.94	493.88
C (Do)	261.63	523.26
D (Re)	293.66	587.32
E (Mi)	329.63	659.26
F (Fa)	349.23	698.46
G (Sol)	392.00	784.00

Beep function

```
#include <Windows.h>
#include <WinBase.h>
int main()
{
    for (int i=0; i<3; i++)
    {
        Beep(261.63, 700);
        Beep(293.66, 700);
        Beep(329.63, 700);
    }
    return 0;
}
```

Frequency (in Hz)
Duration (in ms)

Play ()

```
#include <Windows.h>
#include <WinBase.h>
```

```
void Play(char* s = "CDE EDC ")
```

```
{
```

```
    int i;
```

```
    char c;
```

```
    DWORD frequency[] = { 220.00, 246.94, 261.63, 293.66, 329.63,
                          349.23, 392.00 };
```

```
    for (i=0; s[i] != '\0'; i++)
```

```
    {
```

```
        c = s[i] - 'A';
```

```
        if (c == 32 - 65) // a space implies pause
```

```
            Sleep(700);
```

```
        else
```

```
            Beep(frequency[c], 700);
```

```
    }
```

```
}
```

```
int main()
{
    Play();
    Play("CCEEGGE");
    return 0;
}
```