
Subject: Re: Converting Byte Arrays

Posted by [davis](#) on Wed, 08 Oct 1997 07:00:00 GMT

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On Mon, 06 Oct 1997 16:54:55 -0500, Liam Gumley <liam.gumley@ssec.wisc.edu> wrote:

> One way to read a data file with mixed variable types (integers, floats) is by
> using an anonymous structure, e.g.

>

> record = { var1:0, var2:0L, var3:0.0 }

> openr, lun, file, /get_lun

> readu, lun, record

> free_lun, lun

> help, record.var1, record.var2, record.var3

This is not really portable because you need to know how the structure and data are padded. For example, consider the C code:

```
#include <stdio.h>
```

```
typedef struct
```

```
{
```

```
    short s;
```

```
    long l;
```

```
}
```

```
Short_Long_Type;
```

```
int main (int argc, char **argv)
```

```
{
```

```
    Short_Long_Type sl;
```

```
    FILE *fp;
```

```
    sl.s = 1234;
```

```
    sl.l = 2147483647;
```

```
    fp = fopen ("sl.dat", "wb");
```

```
    fwrite ((char *) &sl, sizeof (Short_Long_Type), 1, fp);
```

```
    fclose (fp);
```

```
    return 0;
```

```
}
```

In general, the SIZE of data file that this program produces will vary. Under Linux, it produces an 8 byte file, whereas under DOS the resulting file is 6 bytes. If you want portable datafiles, never directly write out the structures.

--John
