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레스터연산

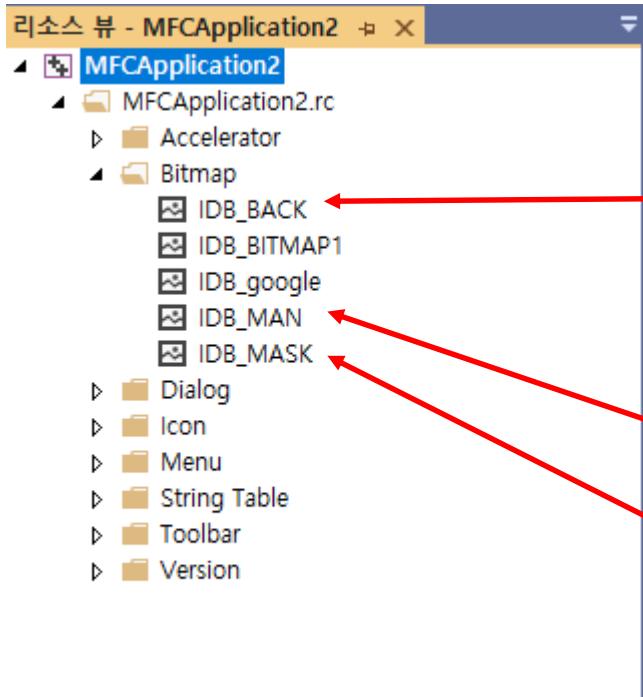


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New Vision,
Young Challenge!

내게 힘이 되는 대학! 서일대학교





失败失败

BitBlt, StretchBlt

```
CDC memDC;
CBitmap bitman, * pOldBit;
memDC.CreateCompatibleDC(pDC);
// 리소스에서 비트맵을 읽어 들여 DC에 선택

bitman.LoadBitmap(IDB_MAN);
pOldBit = memDC.SelectObject(&bitman);

// 비트업 블록 전송
pDC->BitBlt(50, 50, 128, 32, &memDC, 0, 0, SRCCOPY);

pDC->BitBlt(50, 100, 32, 32, &memDC, 0, 0, SRCCOPY);
// 상하좌우로 뒤집어 출력
pDC->StretchBlt(100, 100, 32, 32, &memDC, 32, 32, -32, -32, SRCCOPY);
// 2배 확대하여 출력
pDC->StretchBlt(150, 150, 64, 64, &memDC, 0, 0, 32, 32, SRCCOPY);

memDC.SelectObject(pOldBit);
bitman.DeleteObject();
memDC.DeleteDC();
```

레스터 연산



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```
CDC memDC;
CBitmap bitman, bitmask, bitback, * pOldBit;
memDC.CreateCompatibleDC(pDC);

bitman.LoadBitmap(IDB_MAN);
bitmask.LoadBitmap(IDB_MASK);
bitback.LoadBitmap(IDB_BACK);
pOldBit = memDC.SelectObject(&bitback);

pDC->BitBlt(50, 50, 256, 192, &memDC, 0, 0, SRCCOPY);

memDC.SelectObject(&bitmask);
pDC->BitBlt(50, 50, 32, 32, &memDC, 0, 0, SRCAND);
memDC.SelectObject(&bitman);
pDC->BitBlt(50, 50, 32, 32, &memDC, 0, 0, SRCPAINT);

memDC.SelectObject(pOldBit);
```

$$\begin{array}{c} \text{흰색}(255,255,255) \\ \text{AND} \quad \text{컬러}(X,X,X) \\ \hline \text{컬러}(X,X,X) \end{array}$$

$$\begin{array}{c} \text{검은색}(0,0,0) \\ \text{AND} \quad \text{컬러}(X,X,X) \\ \hline \text{검은색}(0,0,0) \end{array}$$

$$\begin{array}{c} \text{검은색}(0,0,0) \\ \text{OR} \quad \text{컬러}(X,X,X) \\ \hline \text{컬러}(X,X,X) \end{array}$$

```
pDC->BitBlt( 50, 50, 32, 32, &memDC, 0, 0, SRCAND);  
pDC->BitBlt( 50, 50, 32, 32, &memDC, 0, 0, SRCPAINT);
```

SRCAND : AND

SRCPAINT : OR

레스터 연산



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```
memDC.SelectObject(&bitmask);  
pDC->BitBlt(150, 150, 32, 32, &memDC, 32 * nAnimate, 0, SRCAND);
```

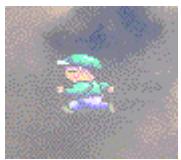
검은색



$$\begin{array}{c} \text{검은색}(0,0,0) \\ \text{AND} \\ \text{컬러}(X,X,X) \\ \hline \text{검은색}(0,0,0) \end{array}$$

$$\begin{array}{c} \text{흰색}(255,255,255) \\ \text{AND} \\ \text{컬러}(X,X,X) \\ \hline \text{컬러}(X,X,X) \end{array}$$

```
memDC.SelectObject(&bitman);  
pDC->BitBlt(150, 150, 32, 32, &memDC, 32 * nAnimate, 0, SRCPAINT);
```



$$\begin{array}{c} \text{검은색}(0,0,0) \\ \text{OR} \\ \text{컬러}(X,X,X) \\ \hline \text{컬러}(X,X,X) \end{array}$$

```
pDC->BitBlt(50, 50, 32, 32, &memDC, 0, 0, SRCAND);  
pDC->BitBlt(50, 50, 32, 32, &memDC, 0, 0, SRCPAINT);
```



```
static int nAnimate;
CDC memDC;
CBitmap bitman, bitmask, bitback, * pOldBit;
memDC.CreateCompatibleDC(pDC);

bitman.LoadBitmap(IDB_MAN);
bitmask.LoadBitmap(IDB_MASK);
bitback.LoadBitmap(IDB_BACK);
pOldBit = memDC.SelectObject(&bitback);

pDC->BitBlt(50, 50, 256, 192, &memDC, 0, 0, SRCCOPY);

memDC.SelectObject(&bitmask);
pDC->BitBlt(150, 150, 32, 32, &memDC, 32 * nAnimate, 0, SRCAND);
memDC.SelectObject(&bitman);
pDC->BitBlt(150, 150, 32, 32, &memDC, 32 * nAnimate, 0, SRCPAINT);

if (++nAnimate > 3) nAnimate = 0;

memDC.SelectObject(pOldBit);
```

에니메이션 타이머 처리



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가상함수 : OnInitialUpdate() 재정의
SetTimer(0, 200, NULL); // 타이머 설정

메시지 : OnDestroy() 재정의
KillTimer(0);

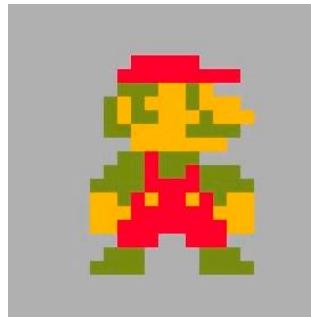
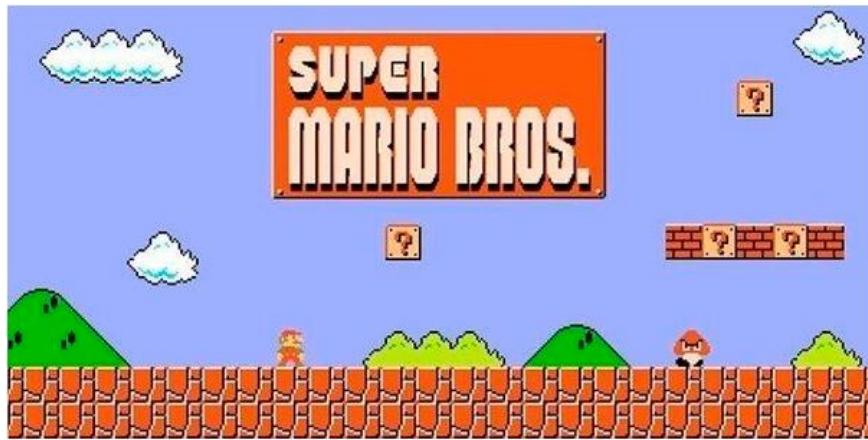
OnTimer(UINT nIDEvent)
// DrawBitmap(); 비트맵 그려줌
Invalidate();

메모리DC 도형

```
CDC memDC;
memDC.CreateCompatibleDC(pDC);
// 화면 DC와 호환성 있는 메모리 비트업을 만듦
CBitmap bmpBuffer;
bmpBuffer.CreateCompatibleBitmap(pDC, 200, 200);
// 메모리 DC에 메모리 비트업을 선택
CBitmap* pOldBitmap = (CBitmap*)memDC.SelectObject(&bmpBuffer);
// 메모리 DC에 그림을 그림
memDC.Rectangle(0, 0, 200, 200);
memDC.Rectangle(10, 10, 100, 100);
memDC.Ellipse(70, 70, 180, 180);
// 메모리 비트업에 그려 진 내용을 화면으로 전송
pDC->BitBlt(0, 0, 200, 200, &memDC, 0, 0, SRCCOPY);
// DC 복원
memDC.SelectObject(pOldBitmap);
```

1985년 슈퍼마리오 브라더스

■ 42kByte



게임 내 모든 사물은 3가지 색으로 표현
마리오 : 빨간색, 노란색, 초록색,
흰색, 바탕 검은색



login_result.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>

<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>

<%
String sId = (String)session.getAttribute("session_id");
if(sId == null){
response.sendRedirect("send_data.jsp");
}
%>

<h1> <%=sId%> 님이 로그인을 하셨습니다.</h1>
</body>
</html>
```

recieved_data.jsp 수정(데이터베이스 연결1)

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%> <!-- 수신 데이터 -->
<%@page import = "java.sql.Connection"%>
<%@page import = "java.sql.DriverManager"%>

<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>

<%
request.setCharacterEncoding("UTF-8"); // 추가
String formID = request.getParameter("id");
String formPW = request.getParameter("pw");
System.out.println("ID = " + formID);
System.out.println("PW = " + formPW);
out.write("ID 2= " + formID);
out.print("ID 2= " + formID);
%>
```

recieved_data.jsp 수정(데이터베이스 연결2)

```
<%
String dbType = "com.mysql.cj.jdbc.Driver";
String dbUrl = "jdbc:mysql://127.0.0.1:3306/test";
String dbid = "root";
String dbpw = "1234";
Connection con = null;

try{
Class.forName(dbType);
con = DriverManager.getConnection(dbUrl, dbid, dbpw);
} catch(Exception e){
e.printStackTrace();
}
%>

<!-- 데이터 베이스에서 가져온 데이터랑 비교 -->
<%
if(formID.equals("abcd") && formPW.equals("1234")){
session.setAttribute("session_id", formID);
response.sendRedirect("login_result.jsp");
}
%>

</body>
</html>
```

DB연결 문제

```
ID = abcd  
PW = 12324  
java.sql.SQLException: Access denied for user 'root'@'localhost' (using password: YES)  
at com.mysql.cj.jdbc.exceptions.SQLError.createSQLException(SQLError.java:121)
```

⇒ <%

```
String dbType = "com.mysql.cj.jdbc.Driver";  
String dbUrl = "jdbc:mysql://127.0.0.1:3306/test";  
String dbid = "root";  
String dbpw = "1234";  
Connection con = null;
```

root

STEP4



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insertForm.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<link rel="stylesheet" href="../css/style.css"/>

<form method="post" action="insertProc.jsp">
<table>
<tr>
<td class="Label"><label for="idt">아이디</label>
<td class="content"><input id="idt" name="idt" type="text" size="20"
maxlength="50" placeholder="Love1004" autofocus required>
<tr>
<td class="Label"><label for="passwd">비밀번호</label>
<td class="content"><input id="passwd" name="passwd" type="password"
size="20" placeholder="6~16자 숫자/문자" maxlength="16" required>
<tr>
</table>
<input type="submit" placeholder="로그인"/>
</form>
```

데이터베이스 만들기

insertProc.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8" pageEncoding="UTF-8"%>
<%@ page import="java.sql.*"%>

<% request.setCharacterEncoding("utf-8");%>

<%
String dbid = request.getParameter("idt");
String dbpw= request.getParameter("passwd");

Connection conn=null;
PreparedStatement pstmt=null;
String str="";
try{
String jdbcUrl="jdbc:mysql://127.0.0.1:3306/test";
String dbId="root";
String dbPass="root";
Class.forName("com.mysql.cj.jdbc.Driver");
conn=DriverManager.getConnection(jdbcUrl, dbId, dbPass);
String sql= "insert into member values (?,?)";
pstmt=conn.prepareStatement(sql);
pstmt.setString(1,dbid);
pstmt.setString(2,dbpw);
pstmt.executeUpdate();
out.println("member 테이블에 새로운 레코드를 추가했습니다.");

}catch(Exception e){
e.printStackTrace(); // 서버 로그에 상세 오류 정보 출력
out.println("member 테이블에 새로운 레코드를 추가에 실패했습니다");
}finally{
if(pstmt != null)
try{pstmt.close();}catch(SQLException sqle){}
if(conn != null)
try{conn.close();}catch(SQLException sqle){}
}
%>
```

Result Grid		
	ebid	dbpw
▶	abcd	1234
*	NULL	NULL

DB 데이터 가져오기 1



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```
<%@ page language="java" contentType="text/html;
charset=UTF-8"
pageEncoding="UTF-8"%>

<%@page import = "java.sql.Connection"%>
<%@page import = "java.sql.DriverManager"%>
<%@page import = "java.sql.Statement"%>
<%@ page import="java.sql.ResultSet"%>

<% request.setCharacterEncoding("utf-8");%>
<H1> DB 데이터 가져오기 </H1>
```

DB 데이터 가져오기 2

```
<%  
Connection conn=null;  
Statement stmt=null;  
  
String jdbcUrl="jdbc:mysql://127.0.0.1:3306/test";  
String dbId="root";  
String dbPass="root";  
Class.forName("com.mysql.cj.jdbc.Driver");  
conn=DriverManager.getConnection(jdbcUrl, dbId, dbPass);  
stmt = conn.createStatement();  
ResultSet sql= stmt.executeQuery("select * from member");  
  
while(sql.next()){  
String id = sql.getString("dbid");  
String pw = sql.getString("dbpw");  
out.write("ID 2= " + id);  
out.write(" ");  
out.write("pw 2= " + pw);  
out.write("<br>");  
}  
  
%>
```

DB 데이터 가져오기 에러

```
11월 15, 2025 11:03:05 오전 org.apache.catalina.core.StandardWrapperValve invoke
심각: 경로 [/myapp]의 컨텍스트 내의 서블릿 [jsp]을(를) 위한 Servlet.service() 호출이, 근본 원인(root cause)과 함
```

```
24:     ResultSet sql= stmt.executeQuery("select * from member");
25:
26:     while(sql.next()){
27:         String id = sql.getString("dbid");
28:         String pw = sql.getString("dbpw");
29:         out.write("ID 2= " + id);
30:         out.write("    ");
```

Stacktrace:]을(를) 발생시켰습니다.

```
java.sql.SQLSyntaxErrorException: Column 'dbid' not found.
    at com.mvsal.ci.jdbc.exceptions.SOLError.createSOLEException(SOLError.java:112)
```

- DB 속성이름이 잘못 되어 있음
- dbid -> ebid



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감사합니다.