

**H.N.G. University, Patan**  
**M.C.A(5 Years Integrated Programme) SEMESTER - IX**  
**905 : Visual Programming with VC++ [Elective – II]**

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- Unit: 1** [25%]  
**VISUAL C++ PROGRAMMING – INTRODUCTION**  
Application Framework – MFC library – Visual C++ Components –Event Handling – String functions- Mapping modes- introduction to GDI- device context – basic drawing – colors – fonts – modal and modeless dialog – windows common controls – bitmaps- Win32 memory management- message processing
- Unit: 2** [25%]  
**THE DOCUMENT AND VIEW ARCHITECTURE**  
Menus – Keyboard accelerators– toolbars – status bars – reusable frame window base class – separating document from its view – reading and writing SDI and MDI documents – context sensitive Help-creating DLLs – dialog based applications
- Unit: 3** [25%]  
**ACTIVEX AND OBJECT LINKING AND EMBEDDING (OLE)**  
ActiveX controls Vs. Ordinary Windows Controls – Installing ActiveX controls – ActiveX control container programming – create ActiveX control at runtime – Component Object Model (COM) – ATL object- OLE drag and drop – OLE embedded component and containers – sample applications
- Unit: 4** [25%]  
**DATABASE MANAGEMENT CONCEPTS**  
Database Management with Microsoft ODBC – Structured Query Language – MFC ODBC classes – sample database applications – filter and sort strings – Database Management with Microsoft DAO – displaying database records in scrolling view- Exception handling

**Text Books :-**

1. David J.Kruglinski, George Shepherd and Scot Wingo, "Programming Visual C++", Microsoft press, 1999 (Unit II – V)

**Reference Book :-**

1. Mastering Visual c++ 6, Michael J. Young, Wiley India pvt.
2. Steve Holtzner, "Visual C++ 6 Programming", Wiley Dreamtech India Pvt. Ltd., 2003.