

# Computer Programming

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Session: Advanced Graphics Events Guest Lecturer: Dr. Abhiram Ranade





Last session: The  ${\tt getClick}$  function for waiting for clicks.



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This session: How to wait for other kinds of events.



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Reference: Chapter 20 of "An introduction to programming through C++", McGraw Hill Education, 2014.



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If there are many windows on the screen, then you must first click on the canvas so that subsequent events will be detected by your program.



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You do not need to know the exact definition of XEvent. Some functions etc. are provided which enable you to get the required information.





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After this execution continues.







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How to get more detailed information: next.

# Getting more information about an event e1



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The following data members can be accessed.

▶ e1.xbutton.button: Equals 1, 2, 3 depending upon which button was pressed or released, assuming event e1 involved pressing or releasing a mouse button.



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Key press events may not be detected properly if "caps lock" or "Num lock" modes are on. Remove these first.





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Information about the event that happened (if any) can be obtained using the functions and members described earlier.









We will write a program that allows you to draw on the canvas.

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- ▶ If the escape key is pressed, the program ends.





We discussed how to handle mouse and keyboard events.

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- ► The drawing program developed above can be extended to recognize what is drawn: Is the user writing something? Is the user drawing a circle?
- ▶ The possibilities for doing interesting projects are endless..