



Colegio de San Juan de Letran
Dominican Avenue, Abucay, Bataan
Library and Media Services

RESEARCH GUIDE: COMPUTER PROGRAMMING

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RESEARCH GUIDES

COMPUTER PROGRAMMING

I. SCOPE NOTE

Computer programming is the process of developing and implementing various sets of instructions to enable a computer to do a certain task. These instructions are considered computer programs and help the computer to operate smoothly. businessdictionary.com

II. SEARCH AIDS (BT: Broader Term, RT: Related Term, NT: Narrow Term)

BT:

- Programming

RT:

- Application software
- System software
- Logic programming
- Creating by mental acts
- Information technology
- Data structures
- Application Programming Interface
- Object-oriented programming
- Programming language

NT:

- Algorithm
- Argument
- Boolean
- Bug
- Char
- Objects
- Logic
- Class
- Code
- Command-line interface
- Compilation
- Conditionals
- Constants

- Source data
- Syntax
- Markup language
- Runtime
- Variable
- Operator
- Operand
- Keywords
- Loop
- Framework
- Data types
- Array

III. INFORMATION RESOURCES

A. LIBRARY RESOURCES

Note: For the appropriate access credentials, please contact the Letran Bataan Library

➤ E-JOURNALS

- Innovations in Education and Teaching International.
<https://www.proquest.com/scholarly-journals/peer-assisted-learning-experience-computer/docview/1785758492/se-2?accountid=190548>
- The Times Educational Supplement Scotland. <https://www.proquest.com/scholarly-journals/time-young-scots-switch-on-computer-programming/docview/1010847713/se-2?accountid=190548>
- Science and Engineering Ethics. <http://dx.doi.org/10.1007/s11948-000-0053-8>
- Proceeding in the Institution Mechanical Engineering.
<https://www.proquest.com/scholarly-journals/application-computer-vision-programming-numerical/docview/195136335/se-2?accountid=190548>
- Journal of Case on Information Technology Education.
<http://dx.doi.org/10.1080/03043797.2018.1544609>
- SIAM Review. <http://dx.doi.org/10.1137/1008129>
- Computers and the Humanities. <https://www.proquest.com/scholarly-journals/creative-arts-approach-computer-programming/docview/214791503/se-2?accountid=190548>
- European Journal of Engineering Education.
https://search.proquest.com/central/publication/publications_12733
- Computer Science Education.
https://search.proquest.com/central/publication/publications_178191
- IEEE Transactions on Software Engineering. <http://dx.doi.org/10.1109/TSE.1988.10002>
- IEEE Spectrum. <https://search.proquest.com/docview/196678544?accountid=190548>
- International Journal of Modern Education and Computer Science.
<https://search.proquest.com/docview/1886771775?accountid=190548>

➤ E-THESES

- Reddy Narasareddy Gari, M. (2019). Using cyberlearning environment to improve Student's learning and engagement in introductory computer programming courses (Order No. 13903059). Available from ProQuest Central. (2310652594). Retrieved from <https://www.proquest.com/dissertations-theses/using-cyberlearning-environment-improve-student-s/docview/2310652594/se-2?accountid=190548>
- Olivares, Daniel Michael. (2019). Exploring social interventions for computer programming: Leveraging learning theories to affect student social and programming behavior (Order No. 13812273). Available from ProQuest Central. (2284212832). Retrieved from <https://www.proquest.com/dissertations-theses/exploring-social-interventions-computer/docview/2284212832/se-2?accountid=190548>
- Bates, Carla. (2017). Teaching pedagogy and preferred learning styles for introductory computer programming courses (Order No. 13855956). Available from ProQuest Central. (2196756143). Retrieved from <https://www.proquest.com/dissertations-theses/teaching-pedagogy-preferred-learning-styles/docview/2196756143/se-2?accountid=190548>
- Clinkenbeard, Drew A. (2017). Factors that influence the success of male and female computer programming students in college (Order No. 10261969). Available from ProQuest Central. (1903667730). Retrieved from <https://www.proquest.com/dissertations-theses/factors-that-influence-success-male-female/docview/1903667730/se-2?accountid=190548>
- Ely, David D. P. (2016). Preparing teachers to integrate computer programming into mathematical problem solving (Order No. 10392748). Available from ProQuest Central. (1874879064). Retrieved from <https://www.proquest.com/dissertations-theses/preparing-teachers-integrate-computer-programming/docview/1874879064/se-2?accountid=190548>
- Portnoff, Scott R. (2016). (1) the case for using foreign language pedagogies in introductory computer programming instruction (2) A contextualized pre-AP computer programming curriculum: Models and simulations for exploring real-world cross-curricular topics (Order No. 10132126). Available from ProQuest Central. (1800303403). Retrieved from <https://www.proquest.com/dissertations-theses/1-case-using-foreign-language-pedagogies/docview/1800303403/se-2?accountid=190548>
- Ruvalcaba, Omar. (2015). Cultural differences in children's pair collaboration: Engaging fluidly versus managing individual agendas in a computer programming activity (Order No. 3729986). Available from ProQuest Central. (1734014516). Retrieved from <https://www.proquest.com/dissertations-theses/cultural-differences-childrens-pair-collaboration/docview/1734014516/se-2?accountid=190548>
- Schuyler, Stanley T. (2008). Using problematizing ability to predict student performance in a first course in computer programming (Order No. 3414060). Available from ProQuest Central. (607138425). Retrieved from <https://search.proquest.com/docview/607138425?accountid=190548>
- de Castro, Christopher H. (2011). Assessing the impact of computer programming in understanding limits and derivatives in a secondary mathematics classroom (Order No. 3471635). Available from ProQuest Central. (887909896). Retrieved from <https://search.proquest.com/docview/887909896?accountid=190548>

- Al-Makhzoomy, Alaa. (2018). Effect of game development-based learning on the ability of information technology undergraduates to learn computer and object-oriented programming (Order No. 10973970). Available from ProQuest Central. (2167115660). Retrieved from <https://search.proquest.com/docview/2167115660?accountid=190548>
- Maddrey, Elizabeth. (2011). The effect of problem-solving instruction on the programming self-efficacy and achievement of introductory computer science students (Order No. 3466275). Available from ProQuest Central. (884796506). Retrieved from. <https://search.proquest.com/docview/884796506?accountid=190548>
- Earle, Maria T. (2011). Group collaborative computer programming with the aid of a robot: Discovery-based learning (Order No. 3462832). Available from ProQuest Central. (880288553). Retrieved from. <https://search.proquest.com/docview/880288553?accountid=190548>

B. OPEN ACCESS

➤ FREE E-BOOKS

- Chemuturi, Murali. (2019). Computer programming for beginners: a step-by-step guide. Boca Raton, FL: CRC Press: Taylor & Francis Group. <https://www.pdfdrive.com/computer-programming-for-beginners-a-step-by-step-guide-d184637692.html>
- Pal, Ruma. (2018). Computer programming problems, kindle ed. India: Math Valley. <https://www.pdfdrive.com/computer-programming-problems-d176177569.html>
- Guttag, John V. (2016). Introduction to computation and programming using python with application to understanding to data. Cambridge, MA : The MIT Press. <https://www.pdfdrive.com/introduction-to-computation-and-programming-using-python-with-application-to-understanding-data-d183850101.html>
- Lee Ford, Jerry., Jr. (2016). Programming for absolute beginner, 2nd ed. USA: Cengage Learning. <https://www.pdfdrive.com/programming-for-the-absolute-beginner-d183757491.html>
- Connor, Joseph. (2015). Programming: computer programming for beginner's learn the basics of Java, SQL & C++, 2nd ed. <https://www.pdfdrive.com/programming-computer-programming-for-beginners-learn-the-basics-of-java-sql-c-d187301052.html>
- Dimitrov, Dilyan. (2013). Fundamentals of computer programming with C#: (the Bulgarian C# programming book). Svetli Nakov & Co. <https://www.pdfdrive.com/fundamentals-of-computer-programming-with-c-d18925361.html>
- Willoughby, Gary. (2006). Pure basic: a beginner's guide to computer programming. Francc: Fantaisie Software. <https://www.pdfdrive.com/purebasic-a-beginners-guide-to-computer-programming-d238144.html>
- Peter, Van Roy. (2004). Concepts, techniques and models of computer programming. England: The MIT Press. <https://www.pdfdrive.com/concepts-techniques-and-models-of-computer-programming-d33505804.html>
- Zelle, John M. (2017). Python Programming: An Introduction to Computer Science, 3rd ed. USA: Tom Sumner. <https://www.pdfdrive.com/python-programming-an-introduction-to-computer-science-d183602644.html>
- Fitzpatrick, J. Michael. (2015). Computer Programming with MatLab. <https://www.pdfdrive.com/computer-programming-with-matlab-d33418254.html>

- Comminos, Peter. (2006). Mathematical and Computer Programming Techniques for Computer Graphics. London: Springer. <https://www.pdfdrive.com/mathematical-and-computer-programming-techniques-for-computer-graphics-d31654904.html>
- Kingston, Jeffrey H. (2002). An Introduction to Computer Programming with Java. Australia: School of Information Technologies. <https://www.pdfdrive.com/an-introduction-to-computer-programming-with-java-d34777716.html>

➤ FREE E-JOURNALS

- Computer in Human Behavior. <https://doi.org/10.1016/j.chb.2020.106349>
- Theoretical Computer Science. <https://doi.org/10.1016/j.tcs.2008.05.007>
- Computers & Mathematics with Application. [https://doi.org/10.1016/S0898-1221\(99\)00138-8](https://doi.org/10.1016/S0898-1221(99)00138-8)
- Science of Computer Programming. <https://doi.org/10.1016/j.scico.2011.04.005>
- Journal of Mathematical Analysis and Applications. <https://doi.org/10.1006/jmaa.2000.6940>
- Procedia-Social and Behavioral Science. <https://doi.org/10.1016/j.sbspro.2015.01.1128>
- Procedia- Computer Science. <https://doi.org/10.1016/j.procs.2019.11.211>
- IEEE Access. <https://ieeaccess.ieee.org/>
- Open Access Journal for Computer Science. <https://peerj.com/computer-science/>
- Information – Open Access Journal. <https://www.mdpi.com/journal/information>
- Journal of Artificial Intelligence Research. <https://jair.org/index.php/jair/index>
- Journal of Machine Learning Research. <http://www.jmlr.org/>

➤ FREE E-THESES

- Abdellatif, Abdelbaset. (2020). Serious games in teaching computer programming : usage and evaluation. (Doctoral Dissertation). Queen's University Belfast. Retrieved from [https://pure.qub.ac.uk/en/theses/serious-games-in-teaching-computer-programming\(30f811f6-124c-4630-a4b5-35fe8250b7e0\).html](https://pure.qub.ac.uk/en/theses/serious-games-in-teaching-computer-programming(30f811f6-124c-4630-a4b5-35fe8250b7e0).html)
- Glanville, Graham Anthony. (2020). Cultivating computer programming self-efficacy through supportive social and self-regulated learning strategies for first year students in higher education. (Doctoral Dissertation). University of Hertfordshire. Retrieved from <http://hdl.handle.net/2299/23560>
- Ivanov, Bozhidar. (2019). Computer literacy : Does a background in computer programming give you better cyber security habits?. (Thesis). Jönköping University. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:hj:diva-44763>
- Alghamdi, Mohammed Y. (2017). Supporting the learning of computer programming in an early years education. (Doctoral Dissertation). Liverpool John Moores University. Retrieved from <https://doi.org/10.24377/LJMU.t.00006390> ; <https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.713394>
- Sajjanhar Atul. (2017). Exploring Second Life as a Learning Environment for Computer Programming. (Thesis). Monash University. Retrieved from <http://hdl.handle.net/10.4225/03/5959c7035546a>

- Ely, David P. (2016). Preparing Teachers to Integrate Computer Programming Into Mathematical Problem Solving. (Doctoral Dissertation). The Ohio State University. Retrieved from http://rave.ohiolink.edu/etdc/view?acc_num=osu1478266333504353
- Alam, Abu S. (2015). A programming system for end-user functional programming. (Doctoral Dissertation). University of Gloucestershire. Retrieved from <http://eprints.glos.ac.uk/2738/>
- Kazimoglu, Cagin. (2013). Empirical evidence that proves a serious game is an educationally effective tool for learning computer programming constructs at the computational thinking level. (Doctoral Dissertation). University of Greenwich. <http://gala.gre.ac.uk/id/eprint/11953/>
- Ranjeeth, Sanjay. (2008). An investigation of the impact of human cognition on the acquisition of computer programming skills by students at a university. (Thesis). Durban University of Technology. <http://hdl.handle.net/10321/346>
- Jackson, Priyalushinee. (2017). Developing a web based blended learning technique to improve computer programming competence of information technology students. (Thesis). Durban University of Technology. <http://hdl.handle.net/10321/2488>
- Areizaga, Ander. (2019). Programming learning games: Identification of game design patterns in programming learning games. (Thesis). University of Skövde. <http://urn.kb.se/resolve?urn=urn:nbn:se:his:diva-17230>
- Bennedsen, Jens. (2008). Teaching and learning introductory programming: a modelbased approach. (Thesis). University of Oslo. <http://urn.nb.no/URN:NBN:no-20126> ; <https://www.duo.uio.no/handle/10852/9962>

C. PROFESSIONAL ORGANIZATIONS

- Association of Software Professionals. <https://asp-software.org/www/>
- Information Systems Audit and Control Association. <https://www.isaca.org/>
- Association for Information System. <https://aisnet.org/>
- Information Security System Association International. <https://www.issa.org/>
- British Computer Society. <https://www.bcs.org/>
- The Institution of Analysts and Programmers. <https://www.iap.org.uk/main/>
- The Institute of Engineering and Technology. <https://www.theiet.org/>
- The Association for Information Science and Technology (ASIS&T). <https://www.asist.org/>
- Association for Computing Machinery. <https://www.acm.org/>
- American Society for Engineering Education. <https://www.asee.org/>
- Computer Research Association. <https://cra.org/>
- Association of Information Technology Professionals. <https://www.comptia.org/membership/it-pro>

D. OTHER RELATED WEB PORTALS

- Udacity. <https://www.udacity.com/>
- Khan Academy. <https://www.khanacademy.org/computing/computer-programming>
- Treehouse. <https://teamtreehouse.com/>
- Code Avengers. <https://www.codeavengers.com/>
- Evanto Tuts+. <https://tutsplus.com/>

- Codewars. <https://www.codewars.com/>
- CodeHS. <https://codehs.com/>
- Code Cademy. <https://www.codecademy.com/>
- W3Schools. <https://www.w3schools.com/>
- Coursera. <https://www.coursera.org/learn/c-for-everyone>
- EDX <https://www.edx.org/professional-certificate/harvardx-computer-science-and-mobile-apps>
- Lynda. <https://www.lynda.com/Python-tutorials/Programming-Fundamentals-RealWorld/418249-2.html>

E. RELATED RESEARCH GUIDES

- Baker College. <https://guides.baker.edu/CS/computerprogramming>
- Wake Technical College. <https://researchguides.waketech.edu/computerprogramming>
- St. Clair County Community College. <https://research.sc4.edu/programming>
- Auraria Library. <https://guides.auraria.edu/computerscience/programming>
- Dominican University. <https://research.dom.edu/computerscience/programming>
- Kean University. <https://libguides.kean.edu/c.php?g=20609&p=119424>
- Austin Community College. <https://researchguides.austincc.edu/CompSci>
- Dalhousie University. <https://dal.ca.libguides.com/csci>
- University of Richmond. <https://libguides.richmond.edu/c.php?g=41860&p=266893>
- University of Maryland. <https://lib.guides.umd.edu/c.php?g=326417&p=2192717>
- Dartmouth Library. <https://researchguides.dartmouth.edu/cs>
- USC Libraries. <https://libguides.usc.edu/computerscience>

IV. TUTORIALS

- Computer Programming Tutorial (PDF Version).
https://www.pdfdrive.com/computer_programming-tutorial-pdf-version-tutorialspointcom-d16563235.html
- GCF Global. <https://edu.gcfglobal.org/en/computer-programming-basics/>
- Software Testing Help. <https://www.softwaretestinghelp.com/basics-of-computer-programming/>
- Free Code Camp. <https://www.freecodecamp.org/news/introduction-to-computer-programming-and-computer-science-course/>
- Wiki How. <https://www.wikihow.com/Start-Learning-Computer-Programming>
- hackr.io. <https://hackr.io/blog/how-to-learn-programming>
- Javatpoint. <https://www.javatpoint.com/what-is-computer-programming>
- PDF4 Pro. <https://pdf4pro.com/view/computer-programming-tutorials-point-bc60f.html>
- Guru 99. <https://www.guru99.com/computer-programming-tutorial.html>
- Wiki How. <https://www.wikihow.com/Start-Learning-Computer-Programming>
- Programiz. <https://www.programiz.com/>
- Tutorials Point.
https://www.tutorialspoint.com/computer_programming/index.htm#:~:text=Computer%20programming%20is%20the%20act,you%20adopt%20a%20proper%20approach.



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