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Appli	Perbadanan Harta Intelek M
	LY2019000664
	04/03/2019

Applicant :

☐ Owner   ☑ Author   ☐ Licensee

Title of work
(Original language)   : The guidebook module of PVBOT : Assistive Technology for Students with Learning Disabilities to learn Mathematical Place Value

Translation   :

Transliteration   :

Name of the Language
(Language that been used in the work)   : ENGLISH

If published in a periodical or serial
(Literary Work)   :

(Volume / Number)	(Issue Date)	(On Pages)

Section A : Category of Works

☑ Literary   ☐ Musical   ☐ Artistic   ☐ Film   ☐ Sound Recording

Date of Fixation / First Published / Erected / Incorporated : | — | / | 03 | / | 2018 |

Section B : Publication

The Work is   :   ☐ Published   ☑ Unpublished

If published   :

(Year of Compilation)	(Date of first publication)	(Country)

Section C : Author

(If author is "same as owner" go to Part D - if more than one author, please attach a list of names and addresses of all the author)

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Section D : Owner   (If more than one owner, please use the attachment)

☐ Please tick (✓) if Owner is same as Author

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*Company Registration No.	: 0352875 - U
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*Company Name	:
*Company Registration No.	:
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Address 2	:
Address 3	:

Postcode	:	City :	Nationality :		
State	:		Country :		
Telephone No.	:	E-mail :	Fax No. :		

Date of Agreement : | | / | | / | |

Period of Agreement : | | / | | / | | until | | / | | / | |

Please provide copy of agreement(s)

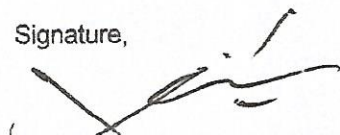* Please state whichever applicable

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Telephone No. : 017-3501179   E-mail : noreenizza@utp.edu.my   Fax No. : 05-3656180

Section G : Declaration

I hereby granted my works to be viewed by public for research and educational purpose : ☑ Yes ☐ No

☑ Author of the work

☐ Owner of the copyright in the work

☐ Licensee of copyright the work (Please provide adequate related document(s))

Signature,

(..)
Name : NOREEN IZZA BTE ARSHAD
Date (dd/mm/yy) : 4/3/2019

Section H : Official Use

☐ Payment Received

Acknowledged by,

DITERIMA
0 4 MAR 2019
Kaunter
Pengurusan Pelanggan (HQ)
Perbadanan Harta Intelek
Malaysia

(..)
Officer's Name :
Date (dd/mm/yy) :

*Please state whichever applicable

THE COPYRIGHT ACT 1987
THE COPYRIGHT REGULATIONS 1990

IN THE MATTER OF Section 42 (1) of
the Copyright Act   1987.

STATUTORY DECLARATION

I, **Noreen Izza Arshad** (**790426145776**) of Universiti Teknologi PETRONAS of Bandar Seri Iskandar, 32610 Tronoh, Perak Darul Ridzuan, Malaysia , a Malaysian citizen of full age do hereby solemnly and sincerely declare as follows:-

1.   I am the Lecturer of Computer & Information Sciences Department of Universiti Teknologi PETRONAS of Bandar Seri Iskandar, 32610 Tronoh, Perak Darul Ridzuan, Malaysia (hereinafter referred to as "UTP").

2.   The facts deposed to herein are to the best of my knowledge and belief true and are within my personal knowledge and from the records of UTP to which I have access.

3.   I am authorized to make this statutory declaration for and on behalf of UTP.

On or about March 2018, (Noreen Izza Arshad (790426145776) and Nazeffa Syaza binti Suhaimy (960828595058) have produced a guidebook of PvBOT: Assistive Technology for Students with Learning Disabilities to Learn Mathematical Place Value. The objective of producing the guidebook is to help the teachers on how to control the EV3 Robot (PvBOT) for the students with learning disabilities to learn about Place Value. Students with learning disabilities are children who have difficulties in learning. The guidebook modules are the source information on how to teach the learning disabilities students knowing the concept of Place Value. PvBOT is a Robotic Lego invention that is designed to act like a human which have been designed and assembled using the Lego Mindstorms EV3's elements and program by using the

Lego Mindstorms EV3 programming software, used to control the performance of the robot. Due to the innovative of technology, some people might have no or less exposure on how to use and control the EV3 Robot (PvBOT). Hence, with the existence of guidebook and teachers or even learning disabilities students could give benefit from the modules in the guidebook on how to control the PvBOT in teaching Place Value. The guidebook module contains three sections which include: (i) structure of the PvBOT, (ii) module for teachers, and (iii) module for students with learning disabilities and two exercises. The module illustrate all the step and procedure on how to use the PvBOT and handling the structure of the PvBOT appropriately. The guidebook module is published only in one language, English. Power Point 2016 is used to create the step by step procedure on how to handle the PvBOT and printed into a piece of book as depicted in Figure 1.

Referring to the PvBOT: Assistive Technology for Students with Learning Disabilities to Learn Mathematical Place Value, these are the items that we would like to protect:

1. The guidebook module of PvBOT: Assistive Technology for Students with Learning Disabilities to Learn Mathematical Place Value (as attached in Appendix 1).
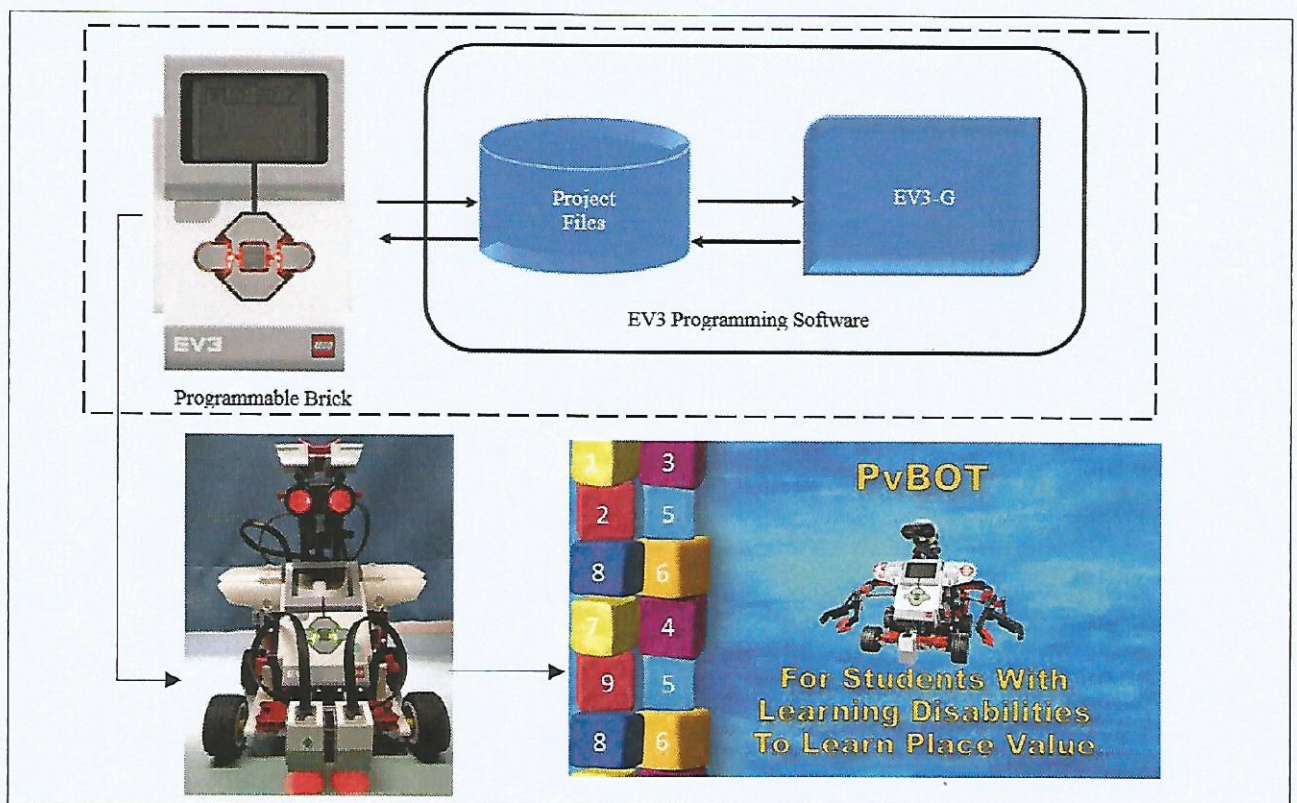

Figure 1: Overview of how the guidebook module of SissyBOT: Assistive Technology for Students with Learning Disabilities to Learn Mathematical Place Value was created

2. The published of module for PvBOT: Assistive Technology for Students with Learning Disabilities to Learn Mathematical Place Value was completed on November 2018.
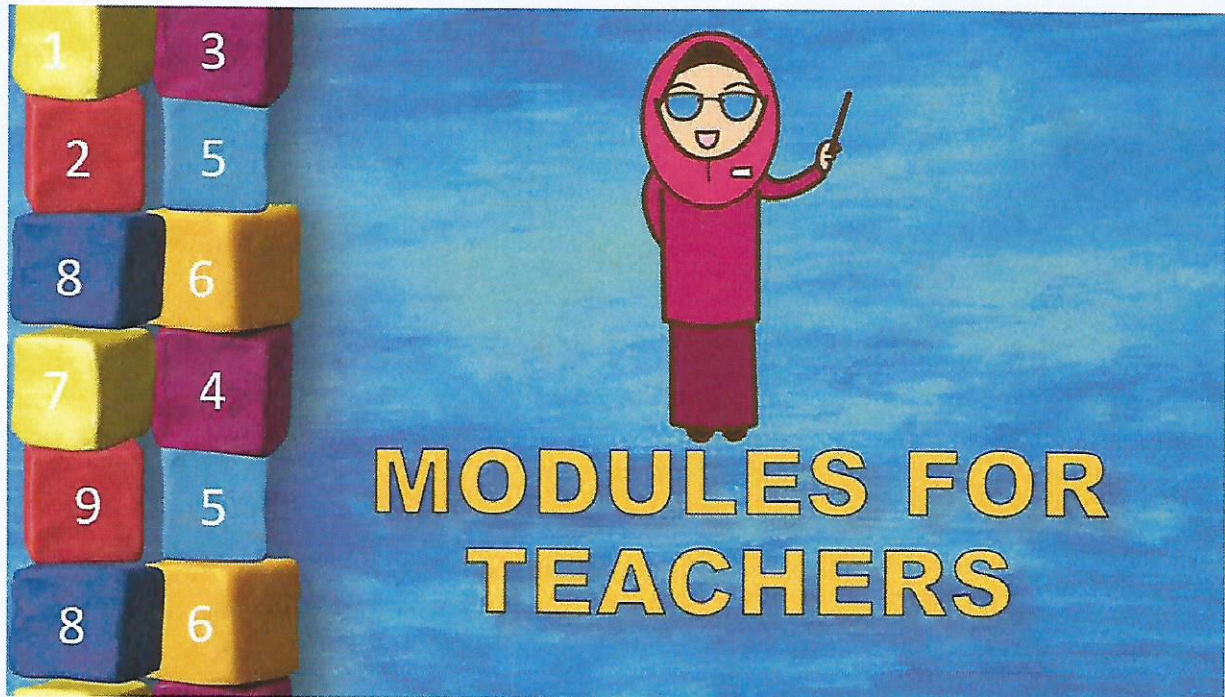
(a) Table of Contents of the PvBOT guidebook module

TABLE OF CONTENT

Topic	Page

Introduction
    Why Place Value?
    What are the advantages?	

Structure of PvBOT
    The structure of robot and EV3 Brick
    Other Essential Tool	

Development of PvBOT
    How to build PvBOT?
    How to program PvBOT?	

How PvBOT works?	
Module for Teachers How to use PvBOT?	

Module for Students with Learning Disabilities
    Module 1
    Module 2	

(b) Module for teachers of the the PvBOT guidebook module

MODULES FOR TEACHERS

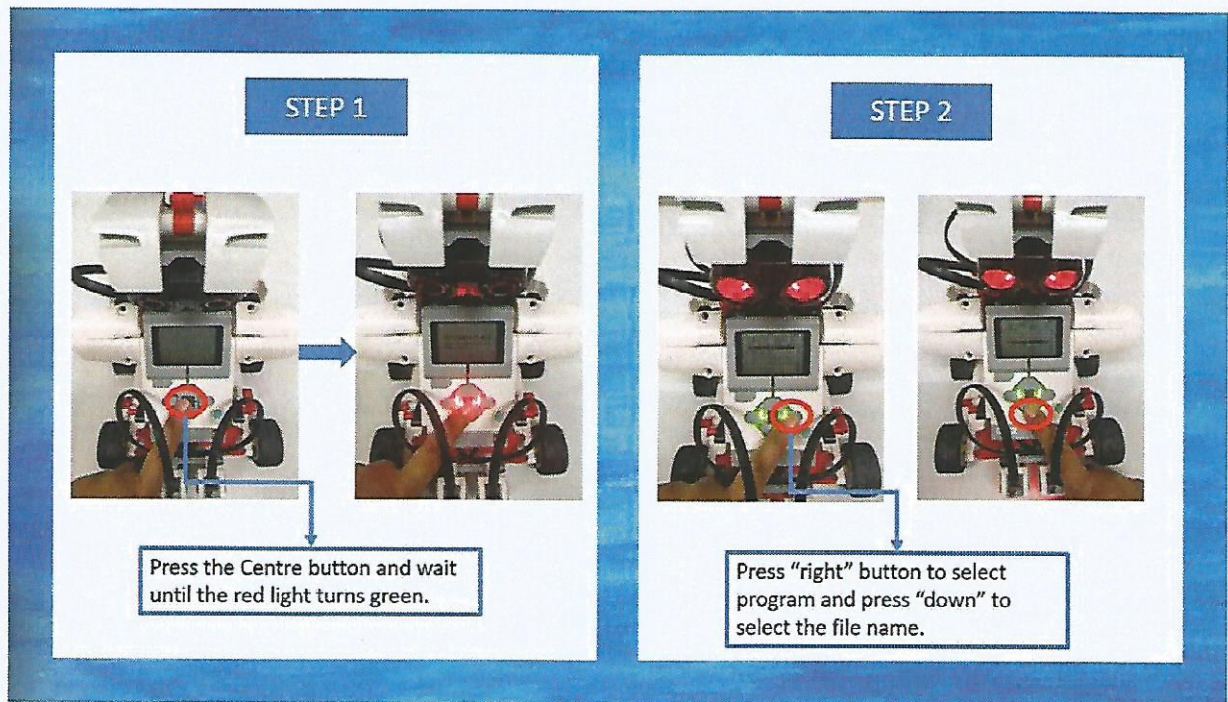(c) Procedures on how to use PvBOT in the guidebook module.

Figure 2: Screenshots of PvBOT guidebook module

3. I am advised and verily believe that computer programs or compilations of computer programs including source codes are Literary Work within the meaning of the Copyright Act 1987 and by virtue of that, the copyright subsists in the Literary Work on the date of creation.

4. I verily believe that since sufficient skill and effort has been expended in the creation of the Literary Work by the Authors to make the Literary Work original in character and that the Literary Work have been reduced into material form, the copyright in the Literary Work subsists from the date it was made or created as stated herein.

5. I further assert that by virtue of the facts deposed to hereinbefore, the UTP is the owner of the copyright in the computer program which includes the source codes and all materials arising therefrom.

AND I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Statutory Declarations Act 1960.

Subscribed and solemnly)
declared by the abovenamed)
Noreen Izza Arshad
at   SERI ISKANDAR
         PERAK)
on this   16th day November, 2018)

Before me,

Commissioner for Oaths

PESURUHJAYA SUMPAH
A257
AAFAR SIDEK BIN
OTHMAN A.M.P., P.P.T.
01.10.2018-31.12.2020
MALAYSIA

No. 17, Medan Selera MDPT,
Seri Iskandar,
32610 Seri Iskandar, Perak,

THE COPYRIGHT ACT 1987

THE COPYRIGHT REGULATIONS 1990

IN THE MATTER OF Section 42 (1)

of the Copyright Act 1987.

This is the document marked **"DRA-1"**

Referred to in the Statutory Declaration dated

This   16ᵗʰ day November, 2018.

Before me,

Commissioner for Oaths

No. 17, Medan Selera MDPT,
Seri Iskandar,
32610 Seri Iskandar, Perak.