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NOTIFICATION OF WORKS
[subregulation 5(2) and 5(3)]

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Applicatio

Perbadanan Harta Intelek M

LY2019000665

04/03/2019

Applicant :

☐ Owner ☑ Author ☐ Licensee

Title of work (Original language) : The source code 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 : | - | / | 11 | / | 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The Work is : ☐ Published ☑ Unpublished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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Address 3 :

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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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Address 2	:
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Section E : Licensee (Section D must be fill in)

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*National Identification No. / Passport No.	:
*Company Name	:
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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)

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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,

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

*Please state whichever applicable

<div align="center">

THE COPYRIGHT ACT 1987

THE COPYRIGHT REGULATIONS 1990

</div>

IN THE MATTER OF Section 42 (1) of

the Copyright Act   1987.

<div align="center">

STATUTORY DECLARATION

</div>

I, <u>**Noreen Izza Arshad**</u> (**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 November 2018, (Noreen Izza Arshad (790426145776) and Nazeffa Syaza binti Suhaimy (960828595058), have developed a Lego Mindstorms EV3 Robot and program for developing a robot for learning disabilities students who were in Standard 4 to learn one of the syllabuses in Mathematics which is learning Place Value with the assistance of their teachers. The programmable robot is known as PvBOT: Assistive Technology for Students with Learning Disabilities to Learn Mathematical Place Value. PvBOT is developed for learning disabilities students and teachers who educated the students. With the assistance of the Lego Mindstorms EV3 Robot, learning disabilities students are able to learn and recognize the basic concept of numbers through Place Value with new methods with the assisted of advanced

robotics technology. 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. PvBOT will be able entice the attention of students with learning disabilities in learning Place Value and assist teacher in teaching. With the advancement of robotics, it is best to have alternative approach of learning as it gives exposure about robotics. The exposure of robotics as one of the learning tools among normal kids has been successfully used, so it would be a good exposure to students with learning disabilities too. The program of PvBOT consist of information about each Place Value of the number and the correct pronunciation of the Place Value. EV3 programming software is use to create all of the program and the programs are installed in the programmable brick (EV3 Bric/Brain) as shown in Figure 1.

Referring to the PvBOT: Assistive Technology for Students with Learning Disabilities to Learn Mathematical Place Value, the items that we would like to protect are:
1. The source code of PvBOT: Assistive Technology for Students with Learning Disabilities to Learn Mathematical Place Value (as attached in Appendix 1).
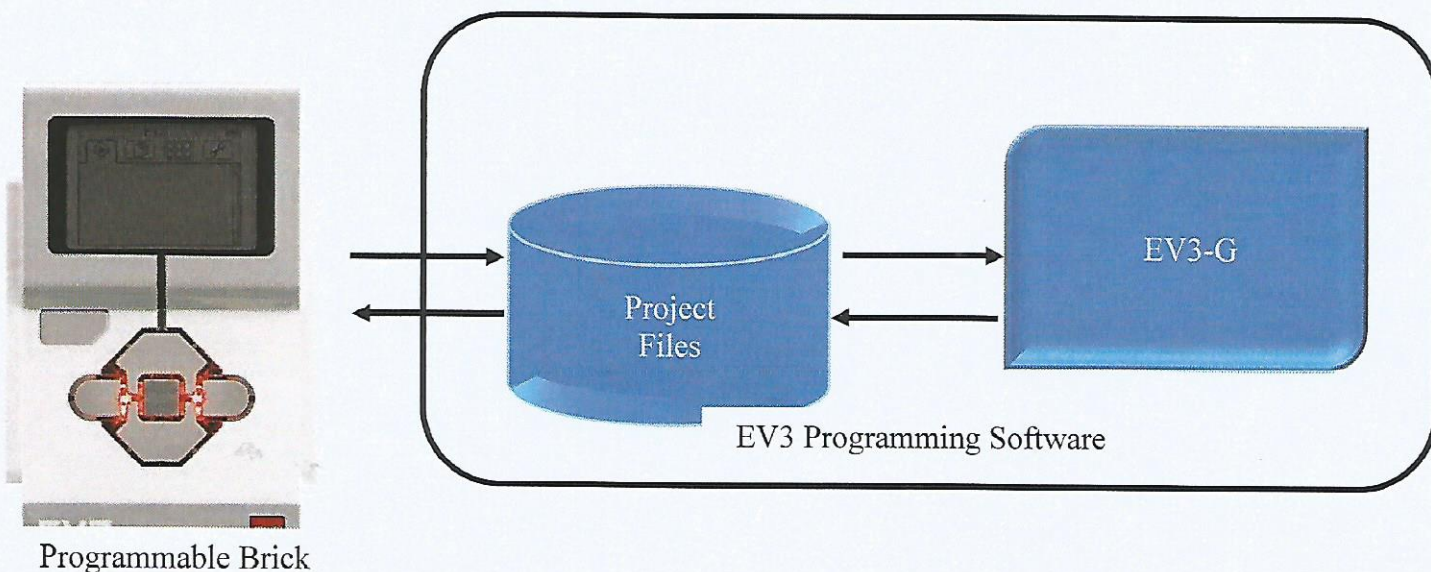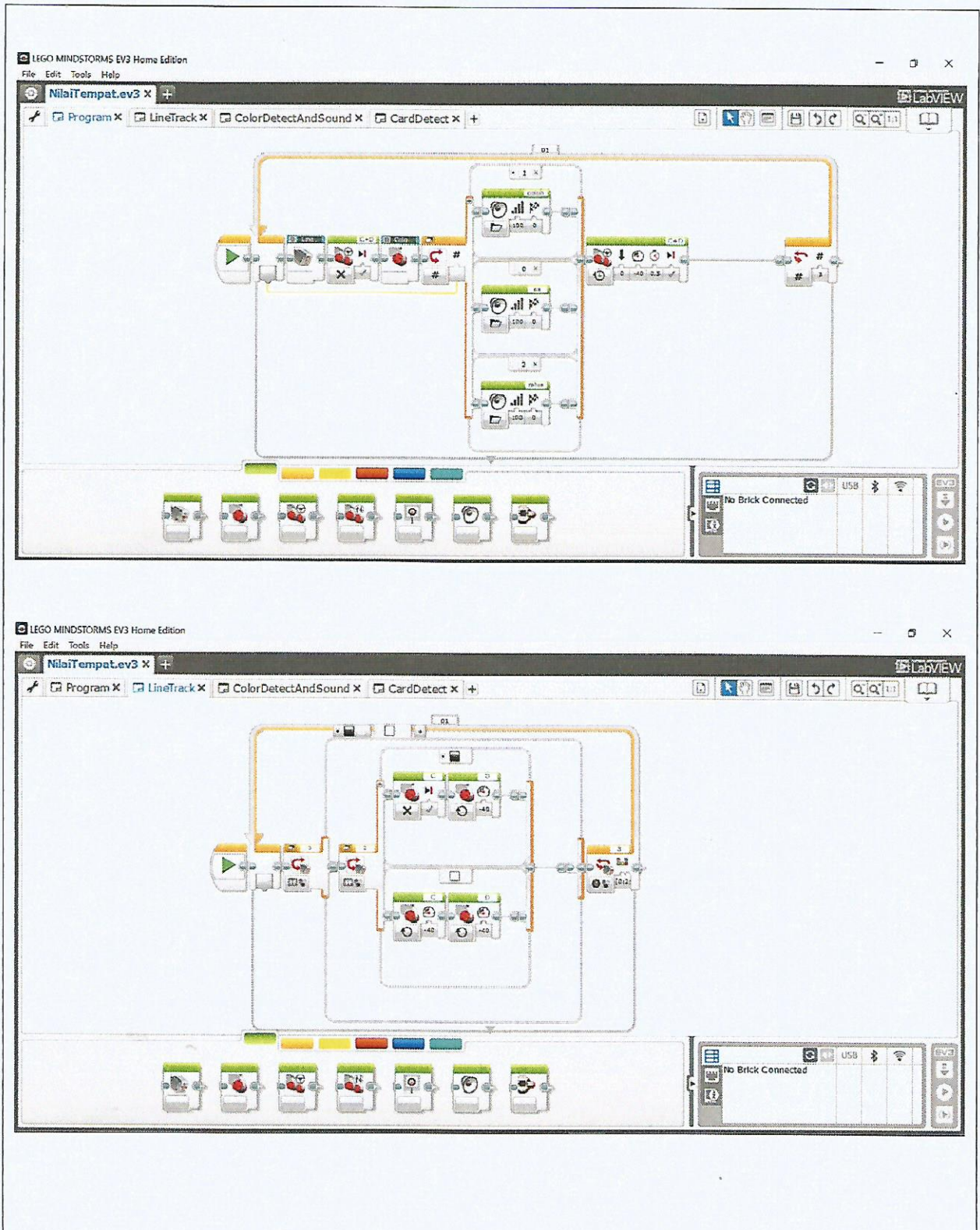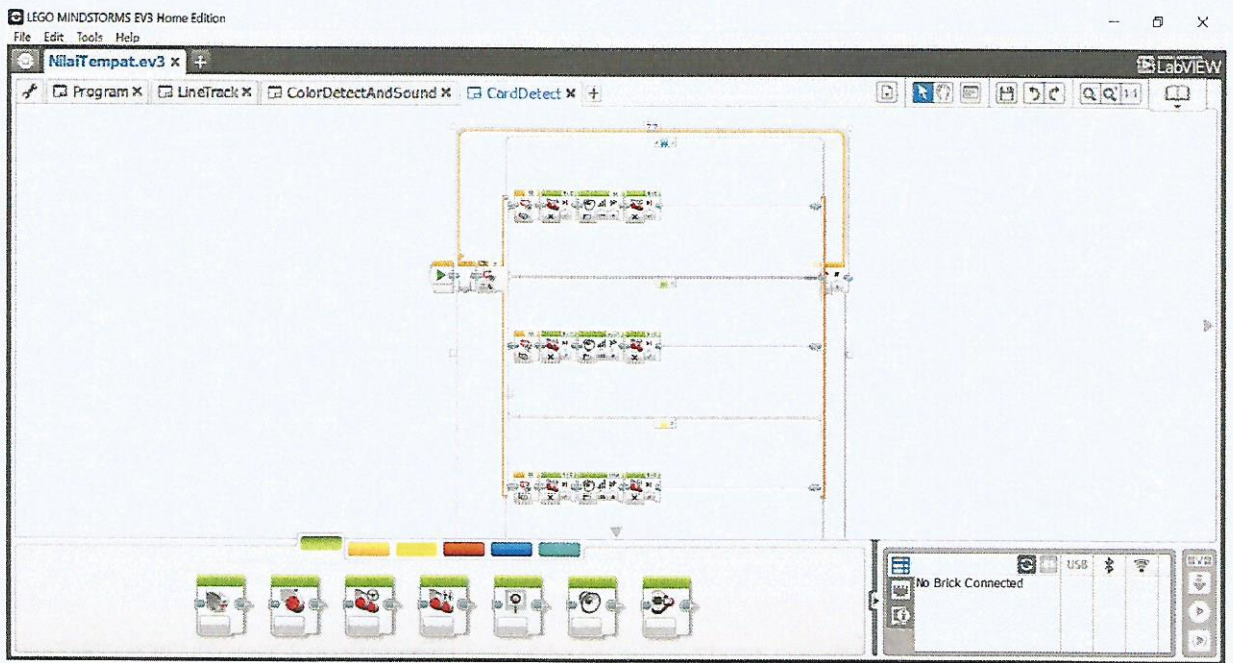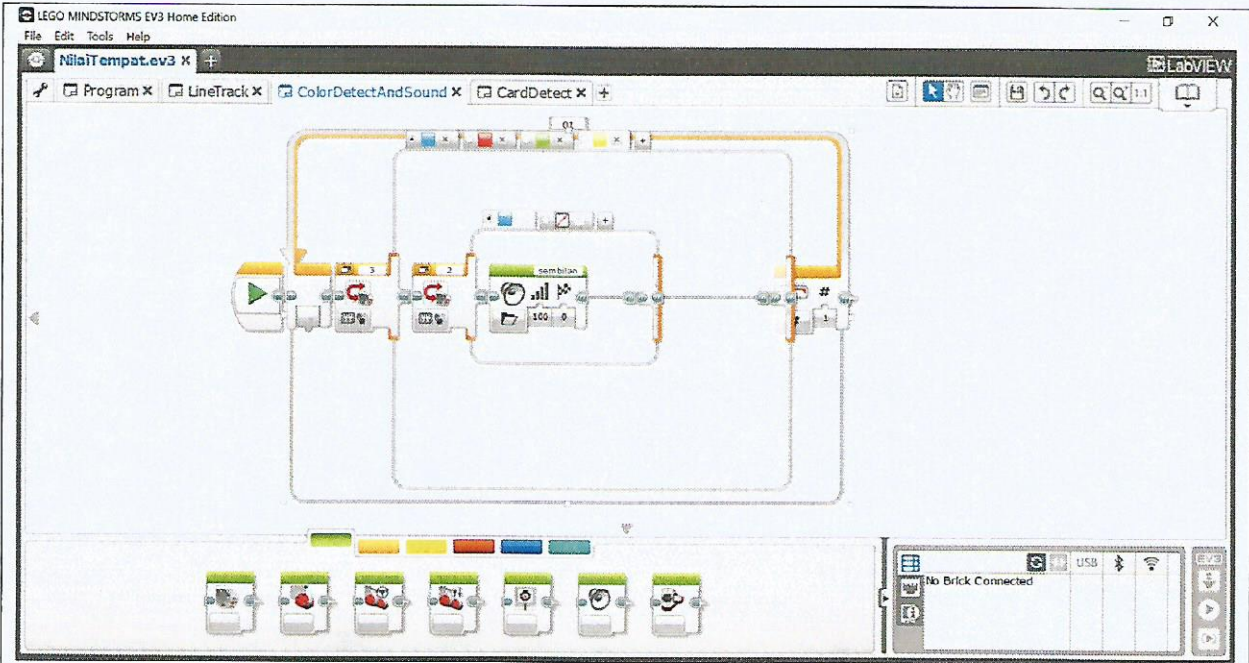

Programmable Brick

Figure 1: Overview of System Architecture

2. The development of the EV3 Robot and source codes were completed on November 2018.

   The robot is now produced and marked as Exhibit, the source codes and snapshots from PvBOT project files are shown in Figure 2.
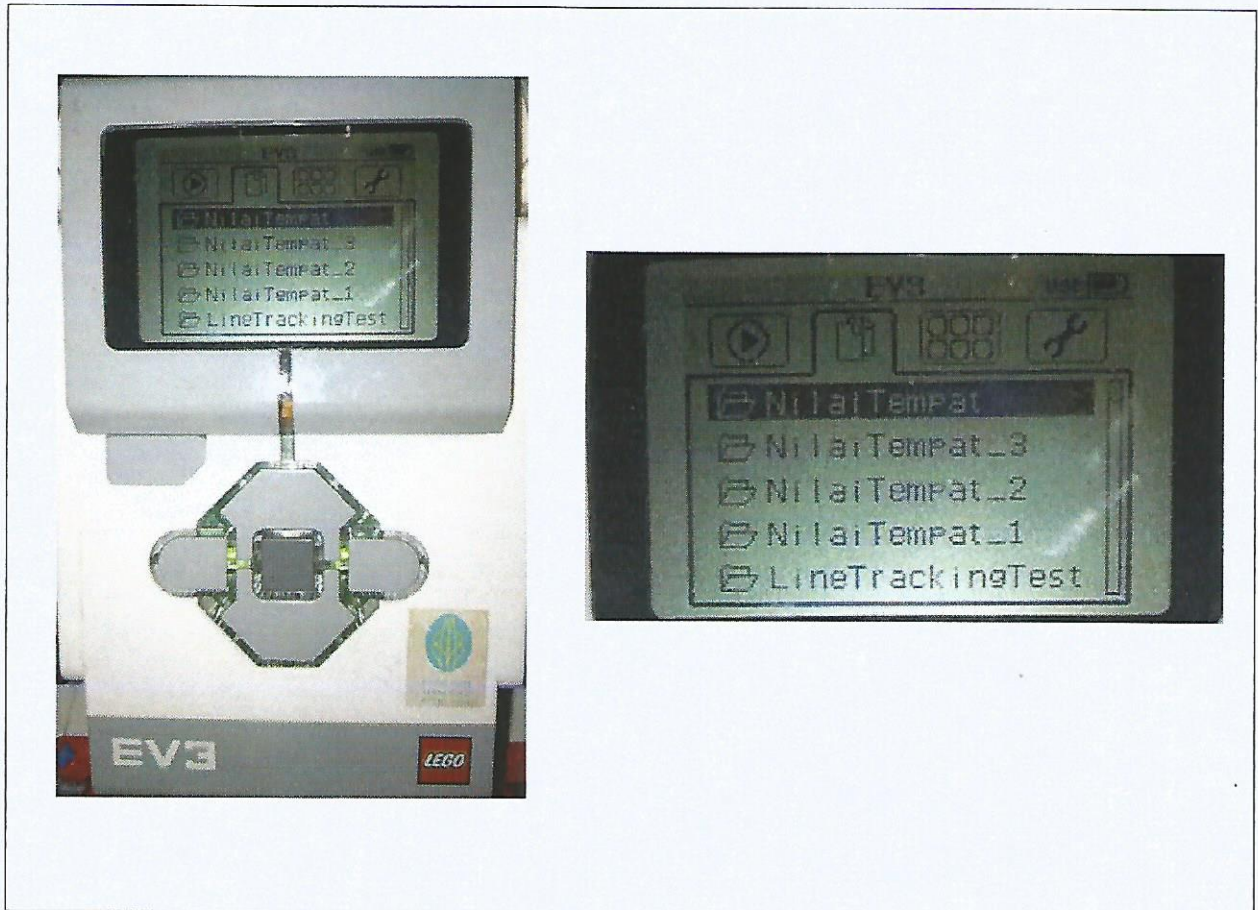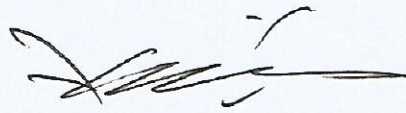
Figure 2. Screenshots of NilaiTempat Project File

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   16th day November, 2018)

Before me,

Commissioner for Oaths

PESURUHJAYA SUMPAH
A257
JAAFAR 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.

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,

JAAFAR SIDEK BIN
OTHMAN A.M.P., P.P.T.
A267
01.10.2018-31.12.2020
Commissioner for Oaths

PESURUHJAYA SUMPAH

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